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MOTOR TREND

NOVEMBER 1955 25c

PUSHBUTTON DRIVING!



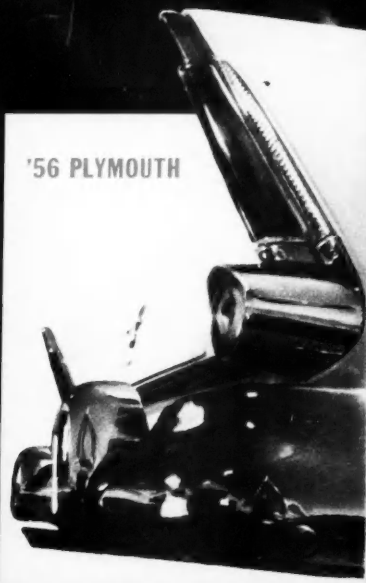
**DRIVING
THE '56s:**
The **CONTINENTAL**
CHRYSLER CARS
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'56 DESOTO



'56 CHRYSLER



'56 PLYMOUTH



Cannot channel



Easy to clean



Filters out all dirt



Traps moisture



Never needs replacing



Reduces friction



Increases engine life



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Waterproof



Saves engine repairs



Unconditionally guaranteed



Easy to install



Saves oil



All-metal construction



Built-in acid neutralizer

End Filter Replacement FOREVER!

with Revolutionary New Type

Micro BRONZE OIL FILTER

1. Eliminates Engine Acids
2. Traps Damaging Moisture
3. Filters all the Dirt
4. Reduces Friction
5. Saves the Detergents

U.S. Patent App.
No. 464498

WHY GIVE YOUR ENGINE HALF-WAY PROTECTION? The Micro Bronze permanent all-metal filter with the built-in acid neutralizer is the world's first filter that guards against all five engine enemies: Acids, abrasives, friction, moisture and sludge.

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MAKE, MODEL & YEAR CAR _____

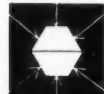
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CITY _____ ZONE _____ STATE _____



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Unaffected by pressure



Screens out abrasives



Efficient at all temperatures



Fits all cars



Eliminates acid

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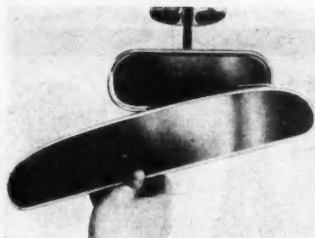
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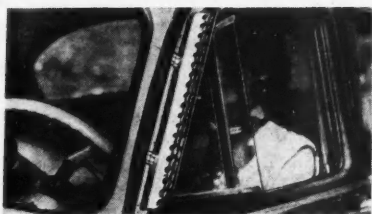


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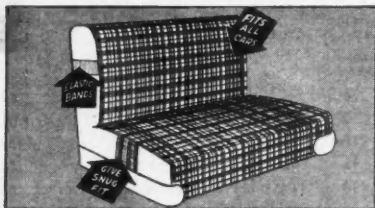
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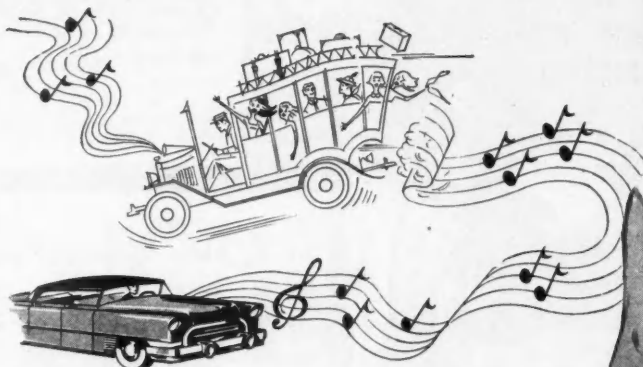
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MAKE OF CAR _____ YEAR _____

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Address _____

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I understand that I can return any item for full refund if not satisfied in every way.

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[MAKE, MODEL, YEAR OF CAR(S)]

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PUBLISHED MONTHLY VOL. 7 NO. 11



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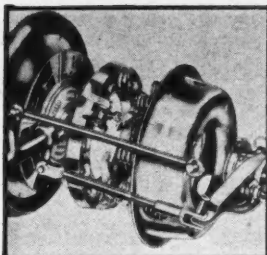
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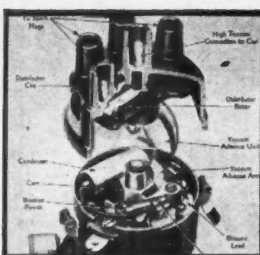
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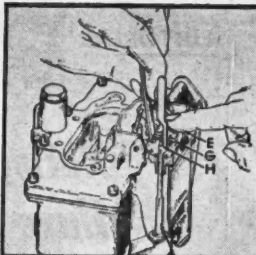
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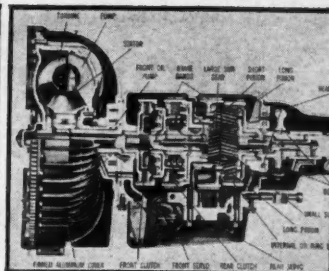
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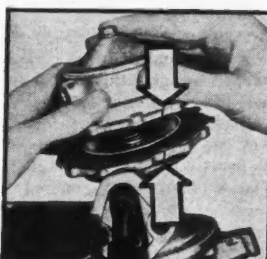


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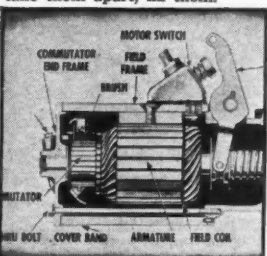


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McCulloch Supercharger



➤➤ Tips

by
John Thompson

Here I am, an engineer, writing a column! That's a switch! But there's a lot of news about McCulloch superchargers these days. Much is of real interest to you, so here goes.

Ford, Chevrolet, Plymouth, and other major lines should have introduced '56 models by now. We've been making changes in our kits as fast as we can get the new specs. This year's conversion won't be as tough as last year's when all the new ohv's were introduced. Our '56 kits should be ready in 30 to 60 days.

Speaking of new models, the stock '56 engines are hotter than ever. This means even greater horsepower increase through supercharging because you start with more. Rumor has it that Plymouth's new V-8 is a real package. We'll have a new kit for this one very soon.

Norm Thatcher of Van Nuys, California, reports that his McCulloch supercharged Chrysler 300 turned 103.36 in the quarter mile! (This compares with a top of 88 stock.) Norm says, "It's just getting a good bite when we run out of the trap!"

Since announcement of a T-Bird kit, we've had a steady stream of T-Birds in our shop. McCulloch supercharger dealers throughout the U.S. report similar interest with this model. So a word to the wise: Don't tangle with a T-Bird until you're sure it's not blown. Blown, the T-Bird will out jump almost anything on the road. 0-60 in 6 seconds flat is hard to beat.

Clark Gable is a T-Bird fancier. He came in the other day and we put on a McCulloch for him. Seems like doctors, lawyers, accountants—everyone—likes the extra kick they get with a McCulloch!

Talking about T-Birds reminds me we have a neat instrument group for this car. The three dials show supercharger pressure, manifold pressure, and fuel pressure. All are mounted in a polished aluminum case which mounts on the steering column. Costs \$50 f.o.b. Los Angeles.

Perhaps you'd like to add 40 to 50 per cent more horsepower to your car without losing any smoothness or reliability, and do it at less cost per horsepower than any other method? If so, drop me a line. Tell me make and year, also type carburetor and if you have a power kit or other power accessories on your car. I'll send you complete details and prices on a McCulloch supercharger kit for your car. Write to: John Thompson, Paxton Products Division, McCulloch Motors Corporation, 827 West Olive St., Inglewood, Calif.

NEXT MONTH: Some comparative acceleration data on McC supercharged cars.

EDITORIAL

Racing DOES Have a Purpose

IT'S JUST TOO BAD that all the effort that went into creating the hue and cry about the tragic accident at Le Mans, banning of racing by the French, German and Italian governments, followed by the withdrawal from racing by the AAA, and the indefinite postponement of the Mexican Road Race, couldn't have gone into reducing the carnage that took place on our nation's highways over the Labor Day weekend.

All the talk against racing after Indianapolis and Le Mans, even with the totting up of numbers killed as a result of racing this year, pales into insignificance compared with the brutal slaying of over 400 people by what should be a pleasurable mode of transportation instead of the projectile of death that it sometimes is.

When are we going to learn? When are we going to understand that the application of common sense to driving, and plain old-fashioned courtesy, can do the most toward reducing this senseless toll of dead that we must face each holiday?

Most certainly there are other things that are necessary to achieve the goal that newspapers would love to scream in headlines after such a holiday weekend, "NO TRAFFIC DEATHS!" We need driver education, better highways, proper traffic enforcement, and more stringent driver licensing.

But, most of all, we need drivers who will drive by the golden rule, who won't get other drivers into dangerous situations by their own foolish antics, who will display the same courtesy on the road they would in a hotel lobby when they bump into someone and murmur, "Sorry." Is it that hard to be courteous on the public highway?

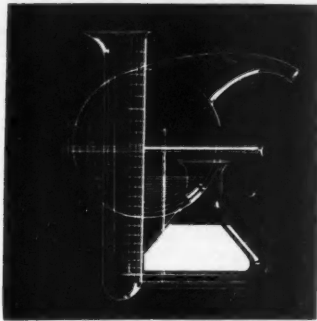
The great majority of motorists can learn an awful lot from race drivers. For all the show drivers sometimes put on to make a crowd-pleasing race, they're a pretty courteous bunch out on the track—they have to be if they want to stay alive. (On this you can take the word of race car driver Duane Carter, who is currently making a series of traffic safety speeches to teen-agers. In these talks, sponsored by Champion Spark Plug Co., Carter explains how safety practices at race tracks can be adapted to highway driving.) While they're out on the track pushing the throttle thru the floorboard, they are watching out for themselves and, in turn, anticipating what the other drivers are going to do. Mighty few accidents occur in racing as the result of foolishness perpetrated by a driver.

There are many more things that can be learned from racing; the recent upsurge in interest towards stock car racing by several automotive manufacturers (see "The Darlington Story," page 28) is the best indication of this. As we see it, racing can become an important adjunct to the information manufacturers glean from their proving grounds testing programs. We'd like to see it become of even more value to them and to you as a potential purchaser of their thereby-improved product.

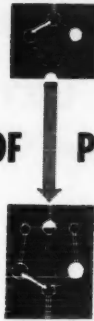
We are going to take a step in this direction by presenting a perpetual trophy to each year's Indianapolis car owner who makes the best performance with a stock-engined car. This, we believe, will serve 2 important purposes: it will encourage the use of Indianapolis as another proving ground for the American automobile, and it will give much-due credit to the car owner and manufacturer who cooperate on such a venture.

We'll have more about this in a future issue.

—Walter A. Woron



PRINCE OF PLASTICS



POLYURETHANE (pronounced poly-your-ethane) may never become a household word, but the new synthetic products made from it are certain to find their way into both household and automobile.

The present and most spectacular form is polyurethane foam. Variations in the chemical formula make its extremely versatile nature possible, and create an astounding number of uses for it. Density can vary from a hard, seemingly brittle form to light super-soft bubbles. Within this amiable range of consistency are countless uses. You can order polyurethane with the "memory" characteristics you need; that is, its elasticity can range from immediate action to a delay of many minutes. Unlike latex foam it is fire retardant and heat resistant (it melts at very high temperatures, but it won't sustain a flame). Its porous nature makes it an excellent insulating material to keep heat in or cold out.

Nearly all of the common solvents, such as gasoline, oil, and acids, along with salt water, sunlight, and body fluids, have no effect on it whatever.

Now, what's it good for? With all its sound-deadening and non-deteriorating qualities plus insulating and adhesive ability, polyurethane should make an impervious, lightweight undercoating.

Flexible polyurethane will almost certainly find its way into auto seat cushions. Lockheed Aircraft is already using an American Latex

Co. polyurethane, "Stafoam," for Constellation seating; it is half the weight of latex foam and won't burn.

Mixed to suitable consistency, polyurethane crash pads on the cowl of your car will save lives in case of accident. "Pad That Panel" (page 58) is an actual example of how much safer our cars can be made with present materials. Polyurethane foam over subpadding of a controlled crushing factor would be even more effective. Steel box sections filled with "stiff" polyurethane would protect all passengers in a crash (see "Crash—and Live!" Oct. MT).

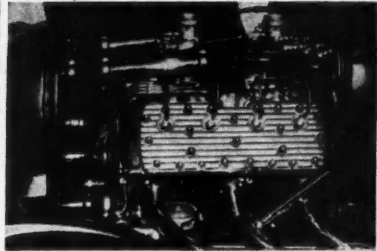
Most tire manufacturers are carrying on extensive experiments using polyurethane plastic in place of natural or other synthetic rubber. The high tensile strength, resistance to abrasion and heat, along with the resistance to chemicals and weather conditions, indicate tires may run up fantastic mileage.

Of course, the big fly in the ointment at present is cost. Most companies say that it would cost several dollars more to tread a premium tire with polyurethane rubber. The difference in the cost between the flexible foam and latex foam is slight in sheet form. Polyurethane foam is at present somewhat more difficult to put up in molded shapes than latex foam. So, of course, fabrication costs more. Development of manufacturing techniques, however, will solve much of the cost problem.



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Get America's Big-time, Big-future **AUTO MECHANICS & DIESEL COURSE**

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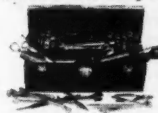
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SPECULATIVE SPREE

Or, a Reader Predicts What's Coming Stylewise in '56

Chevrolet—GM's Harlow Curtice not completely satisfied with notch in beltline which he personally ordered. Will probably be repeated in front door of all '56 models. Look for 3 separate chrome strips on sides. Decent-looking front end will be extensively changed. Pontiac—Notched front door should accentuate the 3 present breaks in fenderline. Will be one of stylists' greatest triumphs to integrate dagmars with Pontiac grumper (combines grill and bumper). Look for at least 3 stripes on hood along with more prominent Chief Pontiac—rocket ship hood ornament. Buick—Look for 4-tone color combinations possibly red, green, yellow, and black. Area behind rear wheel opening to furnish 4th color. Should appeal to patchwork quilt lovers.

Cadillac—Highlight of '56 models will be large chrome S over vertical chrome strip on side, thus forming a \$ sign. . . . About a foot of added length will be required to keep Lincoln and Imperial from winning the longest car contest.

Kaiser & Willys—Will discontinue production. How can you sell cars with windshield posts slanted the right way, no dagmars or misplaced chrome, and reasonable hp ratings? John Braun Milan, Mich.

HEAT WAVE

Gentlemen:

. . . In bold type across the top of the page, I saw printed "The Hottest Car—'55 Cadillac 62" (Sept. '55 MT). This greatly aroused my curiosity inasmuch as I believe the Chrysler 300 fits this title. I read on further in hopes of some explanation. Then I saw it—"4-door sedans!"

. . . This seemed to be a crude way to deliberately avoid the Chrysler 300. Why? Why weren't the test cars all hardtop convertibles? When you say the "hottest" car why not pick just that? If afterwards you wish to break it down into different categories, well, that's another story.

Lou Tiberio

Los Angeles

MT Research traditionally tests 4-door sedans, since they remain the most popular body style. It seemed unfair to proceed on this theory all thru the testing year, then suddenly change our stand. Even if we had, you'll note that our test 300 topped the field only in top speed and 50-80 time.—Editor

PUTTING AROUND

Dear Sir:

The 1st national sports car race held in July, 1955, at the Torrey Pines course may have been the 1st and last of its kind.

The San Diego Planning Commission intends to develop, in the near future, 2 golf courses in the area covered by the race course. One of the few true road racing courses in the U.S. will give way to the more dignified and sluggish sport of golfing.

Unfortunately, there seems to have been little, if any, organized opposition to the plan by local sports car clubs or fans. Memories of past races will probably need to satisfy local fans from now on.

Sam Bass

La Jolla, Calif.

MERCURY RISING

Dear Sirs:

After years of reading and enjoying your fine magazine, I feel as if I had been stabbed in the back. For the past several years, you have continually gone on record against the excessive amounts of chrome trim employed by the Detroit car makers.

. . . And now, like a bolt from the blue, comes your choice of the best-looking cars of 1955. Of all the cars produced in this country, you pick the one with the most (in your words) "excessive splashes of chrome, color and gimcrackery" and tell your readers that this is the best-looking 4-door sedan of '55. (Sept. '55 MT.)

I'm sure that if any of your editors who chose the Mercury owns one himself, it's covered with a complete set of portholes, lighted fender flaps, foxtails, and a sign over the rear license plate saying, "If you can read this, you're too damn close."

Charles Hagenbuch

Arlington, Va.

Reader Hagenbuch has quoted us out of context, but all is forgiven. For the record, the only '55 Mercury in our parking lot is stock except for the removal of 17 pieces of chrome.—Editor

SKIN DEEP

Dear Sir:

. . . Besides testing each car from a mechanical standpoint, how about giving a breakdown on the body? Certainly, a new car purchaser is just as interested in how the body of the car is constructed as [in] the mechanical end. Points which I would consider important are:

1. Gauge of steel used.
2. Reason for leaks and rattles.
3. Type of paint and number of coats.
4. Water drainage features of the trunk, hood, and beneath the upholstery.
5. Materials used for upholstery, floor mats, etc.
6. Omission of gaskets on body points which tend to cause water leakage (tail lights, windshield wipers, doorhandles, etc.)
7. Ruggedness of body and chassis.
8. Bracing of each chassis.

James R. Miller

La Marque, Tex.

MOTOR

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ARE WE RESPONSIBLE?

Gentlemen:

Have you ever considered the possibility that you editors of MOTOR TREND are directly and indirectly responsible for some of the destruction and death on our highways? Ridiculous, you say? Well, let's see. Let me assure you, boys, the dodo is far from extinct, crossword puzzles to the contrary. There are several hundreds of thousands running around this great land of ours. Example of both above statements: Some nitwit picks up a late copy of MOTOR TREND and notes your statement to the effect that a 1954 Cadillac 62 will accelerate 50-80 in 12.7 seconds. Same nitwit also notes you claim said Caddie will travel 113 mph. The dodo then blithely tools his Caddie out in Sunday traffic on a two- or three-lane highway and proceeds to test your figures. Results? A hurry-up call for ambulance or meat wagon.

You will, I believe, agree with me when I say there are only a handful of miles of roads in this country suitable for such driving, and even those only for a top driving expert. The legal speed limit on over 99 per cent of our roads is 60 to 65 mph; of what possible value to the public is acceleration to 80, and speeds of 100 plus? What we are interested in is lower-end torque, not horsepower. . . . Stress the advantages of driving at 45-65 mph, such as high gas mileage, low oil consumption, reduced wear and tear on tires, engines, fenders, grilles, and (most important) nerves and tempers.

Neil Mannerud New Brighton, Minn.

We agree wholly with Mr. Mannerud's 2nd paragraph; in fact, we have repeatedly said as much in our editorial columns. Regarding his 1st points, however, we differ sharply. One of the most vital functions of MT's Research Staff (according to our readers, that is) is the thoro and objective testing of cars. The facts are available to us, and we therefore make them available to you, in confidence that an

informed public is a stronger public.—Editor

BELTING ONE INTO THE SEATS

. . . I can't help noticing the trend toward aircraft designs in today's autos and how they have messed things up in their attempts.

A point borrowed from the Air Force is the safety belt. A safety precaution, yes, but not a very good one. It's inadequate. In the Air Force they use a shoulder harness. I've read more than one report of death causes being attributed to negligence due to the pilot's failure to put on the shoulder harness. Even tho he had his regular seat harness hooked up, what happened? His skull was fractured. Try it sometime in your auto: see if your head will touch the dash by leaning over with the safety belt attached.

On the other hand, take the average American and ask yourself if he can be made to use a safety belt. Can you imagine your wife, children or parents sitting in one position for hours on end? Force a woman to use a seat belt and all the men will be working to insure domestic tranquility.

C. T. Loch

New Castle, Pa.

POETRY AND SHISH KEBAB

Dear Sir:

I had to write you concerning a car which you pictured in your Aug. '55 issue. As one who admires fine cars, I was struck with the sheer poetry of the Flajole Forerunner.

Can it be that American designers are finally getting around to elegance in their designs? What a beautiful thing the Forerunner is, with its gorgeous highlights and almost total lack of chrome! Designers are always talking about how management makes them tack on chrome gew-gaws, but even when they do a sketch of their own, it's easy to see that they either design around a chrome shish kebab stick, or copy (badly) the Italian styles.

Jens Atken

Detroit

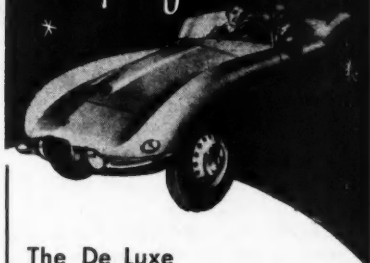
CABS GO CUSTOM



—with this message for '56:

While the rear license plate has happily integrated itself into the rear deck, its front counterpart has remained, in almost every case, a rejected child. For reasons of their own, Los Angeles Yellow Cabs now display this neat trick, just as applicable to '56 Plymouths as to these

Brilliant performer!



The De Luxe

ARNOLT-BRISTOL 2-Litre Sports Car

Up hills—around curves—on the straightaway—in traffic—wherever you go—the fast acceleration and superb cornering and braking qualities of this powerful American-designed sports car with British engine and chassis and Italian body will constantly amaze and delight you! A car that is safe and "forgiving" of human driving errors. Test-drive it today!



WINNER AT SEBRING!

As in 1954 major American sports car races—so again in 1955 the Arnolt-Bristol has distinguished itself with victories. In the gruelling Florida 12-hour Grand Prix of Endurance at Sebring, March 13th, Arnolt-Bristols captured first, second and fourth places in Class E and first, second and fourth places in Series Production Class 7 — also winner of the Sebring Race Team Trophy Prize and the SPORTS ILLUSTRATED Trophy for Production Car Team Index of Performance. (The Arnolt-Bristol Team was the only team to finish intact.)

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Includes complete touring equipment

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SPOTLIGHT ON DETROIT

by Jim Lodge,
Detroit Editor

SELLING PLYMOUTHS thru dealers handling one of the company's other lines was inaugurated in 1930 by Chrysler . . . in a move that, overnight, gave the then-new Plymouth car an established nationwide dealer organization. But now, says Chrysler President L. L. Colbert, "The point is being reached . . . when deeper market penetration for each of the company's car lines can best be achieved in many areas thru divisional-line dealerships."

THIS MEANS THE END of familiar (and convenient) Dodge-Plymouth, DeSoto-Plymouth, or Chrysler-Plymouth dealership setups. Plans are underway for gradual development of separate dealerships for Plymouth Division, as well as the other lines.

THE BIG MOVE, thought by many in the industry to be a natural, will start 1st in a few selected cities and metropolitan areas, eventually expanding when and where the marketing need may arise.

LISTING ADVANTAGES of divisional distribution, Chrysler's president points out that it will enable the dealer and his salesmen to concentrate all of their energies and skills on one line of cars. "It will simplify the problem of maintaining adequate stocks and inventories in the face of the multiplicity of body styles, color combinations, and accessory options demanded by today's buying public. And it will permit more effective use of salesroom display space," he said.

SAFETY IS COMING more to the fore for '56. Ford and Chrysler announced simultaneously a grant of \$200,000 from each company to Cornell University's Medical College for expansion of the school's automobile crash injury research program. Said Henry Ford II, regarding Cornell's cooperation with the industry and the group's results to date: "Their facts have been of considerable help in developing features designed to reduce injuries incurred in traffic accidents." Said Colbert of Chrysler: "Our contribution to the support of the Cornell project is a further investment by

Chrysler Corp. in basic research for highway safety. The results Cornell has already obtained . . . have been of value to Chrysler Corp. in product planning."

GM CONTRIBUTES to an equally important aspect of safety with its plan to lend financial support to its dealers' program of lending cars to high school driver-training classes. Citing "an urgent need for expansion of this work," GM President Harlow H. Curtice announced that a plan to provide a special allowance of \$125 to dealers for every new car loaned to schools goes into effect immediately. (The allowance offsets special equipment costs, reconditioning, and

perhaps most important as far as "loss" is concerned, depreciation.)

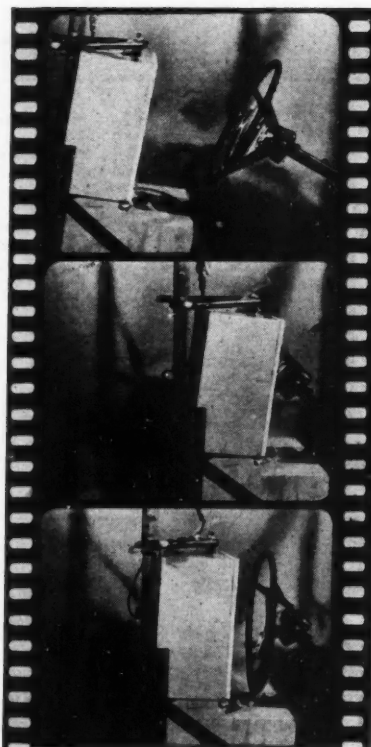
AND HARD ON THE HEELS of safety feature announcements from other sources, Chevrolet is supplying its dealers with factory-approved seat belt components as an extra-cost option for '56. The biggest splash of the announcement could have been made here, but Chevrolet simply slipped in the subdued statement that "to accommodate customer preference," the kits will offer seat belts or (for the first time in production-car circles) belt and shoulder-harness combinations.

IT TOOK GM 22 YEARS to produce its 1st 100-million Diesel horsepower. "Ten years from now—in 1965, General Motors will have produced its 2nd 100-million Diesel power." That confident, far-reaching quote by GM President Curtice kicked off "Powerama," an exhibition dramatizing industrial achievements made possible by Diesel and gas turbine engines. Opened August 31, the show ran until September 25.

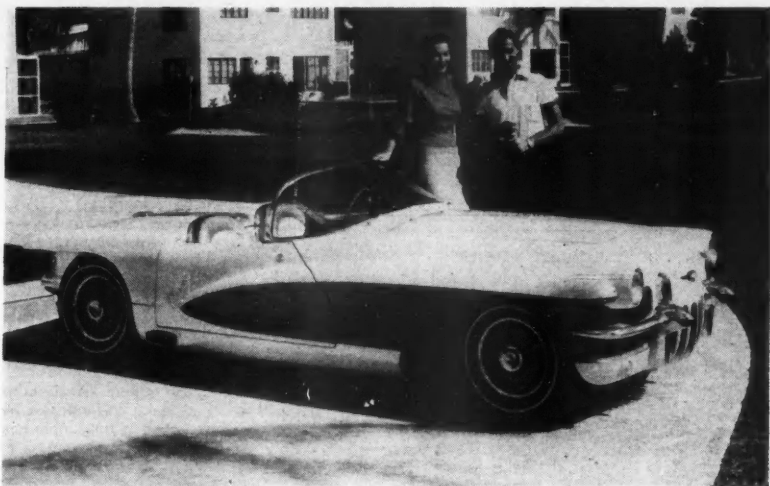
COVERING A MILLION SQUARE FEET of Chicago lakefront, the GM power display marked a historical milestone in corporation history, for it was on this very site, at Chicago's 1933 "Century of Progress" World's Fair, that GM unveiled its 1st modern, lightweight, 2-cycle Diesel engine.

TOP BILLING goes to Diesel and GT power, but fair-goers who might have missed GM's "Motorama" last season will have another chance to see futuristic cars from that show, as well as the sonic-like "Firebird" and GM's highway-tested Turbocruiser bus.

LARGELY INDUSTRIAL in display setups (a rock crusher demolishing 50 tons of rock per day, a cotton gin processing 8000 pounds of raw cotton daily, a sawmill slicing 2000 board-feet of lumber for each day's onlookers), the exhibit offers novelty entertainment, too: A stage show ("world's 1st technological circus") has strength "contests" between elephants and earthmov-



Simulating a driver's body, 167-pound wooden block crashes into new recessed-hub Ford wheel in Cornell lab tests



GM's 2-passenger LaSalle II, introduced at the '55 Motorama, is now working model with V6 engine, torsion bar suspension, innovations leading to much speculation

ers, and tractors doing the mambo. The world's largest dump-truck (Euclid-built, of course) has been converted into a swimming pool, with the truck cab serving as a diving board. Visitors can unleash suppressed boyhood desires by piloting a high-speed Diesel locomotive which is mounted so it will "run" without moving.

LATEST SALES RECORDS point to the '55 model year as being an even bigger production year across the board than '54, when Ford and Chevrolet battled it out for 1st place, and Buick established itself as 3rd-best seller; GM releases (effective thru August 10) have sales the highest in any previous year. The corporation's total for the date was 2,809,005. Special mention comes from Oldsmobile, which produced its 500,000th '55 model (production started in November '54). Olds retail deliveries thru the 20th of August reached 400,988, or a gain of 53 per cent over the new cars delivered in the same period in '54. Pontiac, too, reached the half-million mark, with a 550,000-unit prediction for the current model run. Previous record was in '50, with 446,429 cars. Another half-million mark was hit by Buick as this issue went to press.

MORE CONSERVATIVE in giving out unit figures, Ford states only that car and truck sales have been higher than in any comparable sales period in Ford history. Sales are "well ahead" of a previous 20-day record set in December '54.

NOT TO BE OUTDONE in announcing production figures, Chrysler surprised an Arizona State College faculty member with the news that his Plymouth was the millionth "Forward Look" car since the 1st '55 was delivered 10

months ago. Of the million cars produced to date, 65.4 per cent were V8s, 66.1 per cent had power steering, and power brakes went into 21.5 per cent. Radios were factory-installed in 65 per cent of the '55s, and nearly 10 per cent were air conditioned.

SUPPLY AND DEMAND dictate the need for expansion at American Motors. A 150.5 per cent Rambler sales increase for the 1st 7 months of '55 makes separate assembly operations "imperative." Formerly assembled on the same lines as the Ambassador and Statesman and the Hudson Hornet and Wasp, the Rambler will get a new sub-assembly, feeder and final assembly line, as well as separate inspection and testing facilities. The Rambler already has its own body plant. Production will be up from the current 500 to 800 units per day at Kenosha; add to this the daily El Segundo, Calif., assembly output.

HAVE YOU DISCUSSED COLOR?

Or aren't you that close to buying your '56? When the time comes, tho, you'll be prepped on what's available—at least from Ford. George W. Walker, vice-president and director of Ford styling, says the trend is toward more subtle colors. Ford, outstanding in '55 hues, will still be in there pitching, along with others, for sales thru color, but as this spokesman says, "I don't mean that cars for '56 and later years will be less exciting to the eye from a color viewpoint, but indications are that, as a result of public preference, some colors will be softer." If you still favor sign-board hues, you'll be able to order them, but, says Ford's styling director, "there will also be a wider selection of pastel shades and combinations of subdued colors."

The Rumor Mill

"Willys will drop its passenger line in 1956 . . ."

PROBABLE—Emphasis has definitely been on commercial products this past year, with low sales volume of passenger cars leading to considerable speculation that Willys is considering such a move.

"Chevrolet will not have fuel injection in 1956 . . ."

TRUE—Despite our report (Aug. '55 MT) that Chevy is working hard on fuel injection, they are not far enough along to make it a production item on the '56 models.

"Buick will have a form of ball-joint front suspension in '56 . . ."

FALSE—Suspension will remain basically the same as '54-'55 models.

"The Studebaker Speedster will be dropped in '56 . . ."

FALSE IN PART—At least the name will be dropped in favor of a fancier, less appropriate one. The car will continue, with Packard engine.

"L'Universelle will be dropped as a production possibility . . ."

FALSE—This Motorama-born special will appear in mid-'56 in both a station wagon and panel delivery form. It will retain front-wheel drive, coupled to a potent V8 engine up front.

"Ford is considering a yearly show to compete with GM's Motorama . . ."

PROBABLE—They see more to gain here than to lose, judging from the success of Motorama. Name—Fordorama?

"Convertible station wagons are in the offing . . ."

FALSE—They are more likely to have retractable roofs, altho the increased emphasis on this body style might sow numerous new ideas.

"GM has not abandoned the possibility of torsion bar suspension . . ."

TRUE—At least if you can accept the latest version of the LaSalle roadster as any sort of criterion. It has not only torsion bar suspension, but a working model of a V6 engine. The suspension is a newly unfettered torsion arrangement front and rear, with 2 torque arms each extending from the transverse bars. At Powerama, if you stooped to turntable level, you could clearly see the rear-mounted transmission and an unusual spot brake with an axis perpendicular to that of the driveshaft.

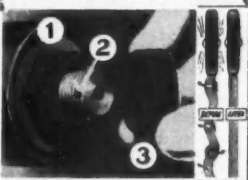
"I got 6,000 extra miles from my tires ...for only \$2.95!"



Tired of tires wearing out too fast, even with your wheels in balance and front-end perfectly aligned? The trouble lies with *ordinary* front wheel spindle nuts. Tighten one down *properly* and the odds are ten to one that the cotter pin holes won't line up. *Line up they must*... so you either turn the nut *too tight* (and ruin your bearings), or back it off so it's actually *too loose*. Result: Wheel "play" that's magnified 43 times from bearing to tire tread... causing "snake-tracking," high speed wobble, excessive tire wear, mileage reducing drag, and "zigzag," hard-to-control steering.

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- 1 Install micrometric nut to precise bearing tightness.
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Micro-Lok Spindle Nuts are precision machined from the toughest carbon steel—are 100% stronger and safer than old style nuts! They are easy to install, too... you can do it yourself in 15 minutes (simple instructions included).

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Micro-Lok Spindle Nuts are guaranteed for the life of your car! Order yours today! If not 100% satisfied, return within 60 days for full refund. See your local dealer or

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REVELATIONS

RPM

PER MINUTE

FISHER BODY CONTEST WINNERS

WITH APOLOGIES to our readers and all others concerned, we are now announcing the results of the 1955 Fisher Body Craftsman's Guild model car competition. We were supposed to have done this in this column for the October '55 issue. During the confusion surrounding press deadlines, etc., we goofed, and we're sorry.

On pages 36-39, Oct. issue, we show pictures of top-notch entries in the 25th Annual Fisher Body Craftsman's Guild model car contest. MT's "winners" were selected by the editors in Detroit before either regional or national judging was completed. The picture pages went to press before the national winners were announced on August 2. Our caption for Milton Antonick's car hinted at our feelings about it. Fisher's professional judges agreed with us; Milton won 1st place in the senior division and gained a \$4000 scholarship in the university of his choice. Needless to say, he plans to be an automotive designer when he graduates.

Other results in the Senior Division are: 2nd, Robert F. McDonnell, Stockton, Calif.; 3rd, John A. Stein, Chicago; 4th (tie declared), John E. Holding, Medford, Mass., and Wallace E. Bakken, Grand Forks, N.D.

In the Junior Division the 1st prize winner is Thomas F. Greene, Medina, Wash.; 2nd, Adrian Bruno, Rochester, N.Y.; 3rd, Anthony Caracciolo, Trenton, N.J.; 4th, Carl C. Ulmschneider, Jr., Lodge Pole, Neb.

These nine boys now join 131 previous national winners of the competition in membership in the Body by Fisher Hall of Fame.

University scholarships with a total value of \$21,000 rewarded these 9 boys for the hundreds of hours of hard work, their countless dreams, and energetic planning.

SPARE TIRE SAVES LIVES

THE SPARE TIRE in the trunk of an automobile has often been called a life-saver by motorists who suffer tire trouble on the highways. But the spare tire can live up to its nickname and be used to rescue drowning persons, according to tire engineers at the B. F. Goodrich Co.

The annual crop of warm weather drownings reveals that many of the tragedies occurred because of the lack of life-saving equipment or the inability of an unskilled swimmer to save another. And yet, BFG tire men point out, a 1st class life-saving tool was within easy reach in most cases—the spare tire in the automobile.

Water rescue demonstrations by police and safety groups have shown that a spare tire, wheel and all, can safely support up to 6 people in the water. Even a person who cannot swim can easily push a tire out to a person struggling in the water. The rescuer can keep the tire between himself and the person in distress, preventing the drowning person from grabbing the rescuer. What's more, the spare tire can be equally effective in winter as a rescue tool for people who have fallen thru thin ice.

The value of the spare tire as a life preserver may lead auto manufacturers to design spring-release spare tire assemblies that will release the tire in a few seconds with a minimum of effort.

In the meantime, remember the spare tire if you should witness a drowning emergency. Keep air in your spare; it may save a life.

SAFETY HEADLIGHT SHIELD

DRIVING IN A FOG? A new rubber fog shield, attached to the headlights by suction discs, prevents any upward diffusion of the beam. This permits the use of undimmed headlights and eliminates the glare normally encountered when driving in foggy weather. The shield is also effective for normal night driving, as full headlights can be used without blinding oncoming motorists.

COLD COMFORT

THE FIRST SELF-VULCANIZING cold patch kit for tubeless tires to be offered by American rubber industry now is available to Firestone dealers.

The new tubeless tire repair kit contains tools and materials to make self-vulcanizing tubeless tire repairs as strong as those obtained using hot patches and clamps and as easy as patching an inner tube.

Specially developed rubber cold patches chemically vulcanize themselves onto the tire injury without the application of heat.

Using Firestone's new cold patch repair kit, any tire serviceman can repair injuries as large as $\frac{3}{16}$ -inch without the use of internal heat or curing equipment. Permanent repairs can be made to all tubeless tires, except those containing puncture sealant.

The new kit introduces the Rema patch, which cures itself to the injured area on the inside of the tire thru the use of special vulcanizing fluid.

To repair a tubeless tire injury, the serviceman locates and marks the leak, demounts the tire and cleans the injury. Then he inserts filler rubber in the injury, using the threading tool and awl. After roughening the area around the injury, he applies the self-vulcanizing fluid over the buffed area, lets it dry for 5 minutes, then stitches a patch over the area. Chemically, the patch is vulcanized onto the injured area. After the tire has been mounted and checked, it can be placed back in service immediately.

DODGE RECORD RUNS

EIGHTY AAA STOCK CAR RECORDS fell Sept. 12th before the onslaught of a new 1956 Dodge on the Salt Flats at Bonneville, Utah in what was termed by A. C. Pillsbury, AAA Contest Board Director, "The fastest stock car performance tests ever certified by the AAA Contest Board."

The 80 new records are in addition to the 196 AAA records established by Dodge in the Fall of 1953. These records are in the Unlimited Class—Closed Car Division.

Twenty-four acceleration and speed records were seized by Dodge Chief Test Driver Danny Eames on the straightaway runs, including a new, all-time AAA record of 114.05 mph for the measured flying mile (breaking the 1953 record by almost 6 mph) and 79.55 mph for the mile from a standing start (old record was 73.97).

At presstime, Eames was on the 10-mile endurance run oval, dividing driving chores in 3-hour shifts with 92-pound test driver Betty Skelton, and Mexican Road Race driver Ak Miller. Latest calculation on the endurance run indicated an average speed of 112.82 mph, including refueling stops.

VOLKSWAGEN TO PRODUCE CARS HERE

BECOMING THE 1ST FOREIGN FIRM to produce cars in this country will probably be the honor of the Volkswagen Co. of Germany. They recently acquired Studebaker-Packard's Brunswick, N.J., plant for about \$4 million. Production of VW's there will begin next year after dies arrive from Germany and tooling is purchased here.

PRETTY BABY



MG gets A for effort on its new-look Midget for 1956

AT LONG LAST, MG has abandoned its old-but-handsome lines for new and handsomer ones, as forecast by MOTOR TREND 3 months ago. Looking considerably slicker than its Le Mans prototype suggested, the new A (following, as did Ford, a long procession of Ts) showed up in a few showrooms shortly after we went to press with this issue.

Deep box-section side members put the driver and passenger within the frame instead of on top of it. The engine is essentially BMC's B Series unit, the familiar long-stroke overhead-valve 4. It has a 2.88-inch bore, a 3.5-inch stroke, and a displacement about as close to 1½ liters as you can get (1489 cc, 90.88 cubic inches). Differences from the prototype's specifications (Aug. MT) are in horsepower and compression ratio; these are now officially 68 and 8.3 to 1. The rear-axle ratio will be 4.3 to 1, and 5.60 x 15 Dunlops will fit standard wheels as shown here. A one-piece alligator hood is hinged at the rear.

A little more in the way of U.S. dollars will probably be requested for the new model, whose top speed of 90 mph should help to put it in demand. Center-lock wire wheels are an extra.

(Continued on page 69)



For the VW
FOUR-BARREL
CHROME TAIL PIPES

Terrific Get-Away!

FOR THE

VW

PORSCHE

and the MG

WORLD CHAMPIONSHIP

ABARTH

PRECISION-BUILT

DUAL Exhaust Mufflers

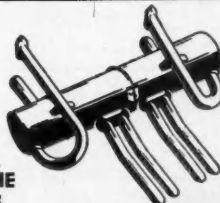
■ Step up your engine power enormously with this revolutionary, free-exhaust muffler by Abarth, makers of the exhaust systems used on the Ferrari, Mercedes and others of the world's finest cars. Easy to install. The Abarth will outlast several ordinary mufflers.

FOR THE VW, MODEL A-100 \$32.50

FOR THE MG, MODEL MG-1 \$39.50

PORSCHE, MODEL P-1000 \$39.50

Price Includes Complete Kit



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PORSCHE
MUFFLER

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- 7 COMBINED VACUUM GAUGE & FUEL PUMP TESTER Engine analysis gauge — 34 different tests — (3 1/2" dia.) was \$11.70 only **\$4.98**

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- ☐ Send C.O.D. Same \$1.50 FREE Chamy-Skim and money-back guarantee!
- ☐ Send on "free trial" basis. No money enclosed. (add postage and handling.)

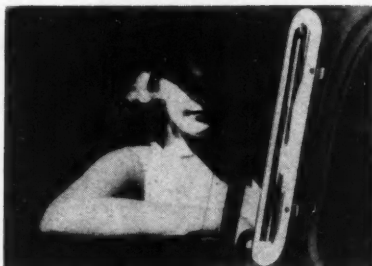
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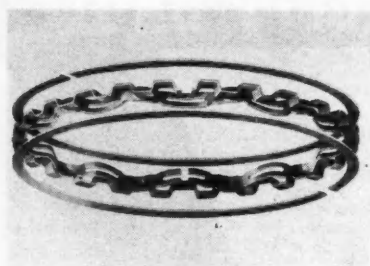
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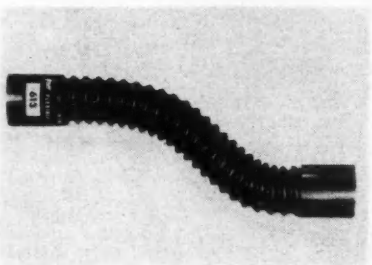
motoring trends



WIND DEFLECTOR of stainless steel by Style-King auto accessories is guaranteed to cut down wind roar, enabling passengers to enjoy a quieter, more relaxing ride. Also reduces fatigue on long trips, deflects rain and snow. Rattleproof and rustproof. \$2.98 pr. Groboski Industries, 6055 So. Ashland Ave., Chicago 36.



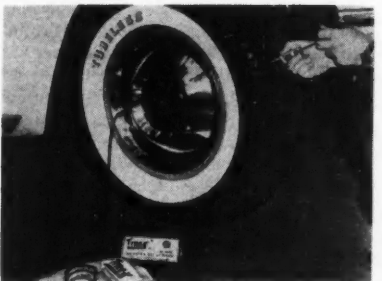
SEALED POWER's new CS-50-U oil ring is for modern engines with high vacuum on deceleration and idling. The new steel ring is designed to combat the tendency of a high vacuum to pull oil around the sides of the ring, should eliminate those intermittent puffs of blue smoke. For further information contact your local auto parts store.



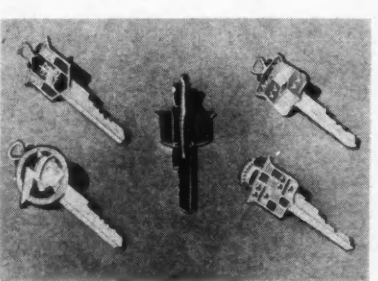
IMPROVED LINE of radiator hose is announced by W. J. Voit Rubber Corp. Designed to meet the needs of present-day powerplants by resisting heat, abrasion, soluble oils, radiator additives, and cooling system chemicals, these new flexible hoses feature all-neoprene construction. Contact your local service station or garage operator.



KAR KAMP announces a handy rig for campers which takes but 5 minutes to put up. You then have a 7 1/2 x 10 1/2 foot outdoor room. Erected without tools, this all-aluminum car-top carrier fits any standard hardtop car. Weighs 88 pounds, features heavy-duty fabrics and rust-proof zippers. Kar Kamp Mfg., 11680 McBean St., El Monte, Calif.



TYRE-X tubeless tire repair kit lets you fix your own flats caused by rim leaks and small punctures. Without removing tire or wheel from car, leak is repaired quickly and permanently, tire reinflated and you are ready to go. Especially handy on trips. \$3.39 complete with instructions. Tyre-X Sales Corp., 1640 Court Pl., Denver, Colo.



EXTRA CAR KEYS in the form of a tie clasp for men or an attractive piece of costume jewelry for ladies provide "lockout insurance." A full color crest of your car mounts on a 14-kt. gold-plated key cut to fit your lock. Specify make and year of car. \$1.95 from Newhouse Automotive Industries, 5803 E. Beverly Blvd., Los Angeles 22.

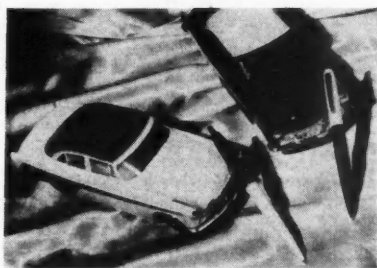
This department is not composed of paid advertising. All items are guaranteed by the manufacturer for immediate refund if you are not satisfied. Claims made herein are those of the manufacturer, and do not constitute an endorsement by Motor Trend. When ordering, include sales tax if required by your state.



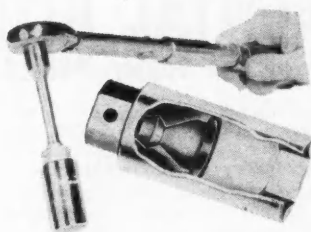
AN APPLICATION of Protex works for an entire season to prevent rust on any metal parts. Not a plastic coating, Protex penetrates metal pores to check rust, still leaves a protective coating. Non-inflammable liquid can also be used on battery terminals, etc., to inhibit corrosion. Sharon Mfg. Co., 2651 W. Division St., Chicago 22, markets Protex in aerosol can for \$1.69.



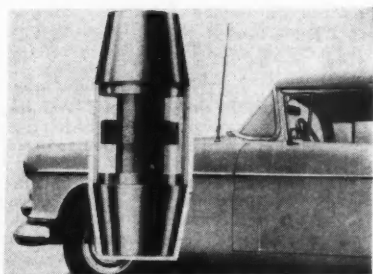
PROPANE-FUELED, this Bernz-O-Matic torch kit contains necessary components for a multitude of jobs requiring heat or flame. A variety of 4 tips come with replaceable propane cylinder. Excellent for jewelry repairing, heavy soldering, sweat fitting, burning paint and other tasks. At retail stores everywhere for \$8.88. Made by Otto Bernz Co., Inc., 280 Lyell Ave., Rochester 6, N.Y.



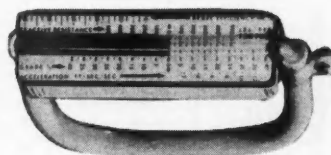
TU-TONE, the new ballpoint pen introduced by the Paper-Mate Pen Co., is styled as the result of influence on the market by 2-tone colors on automobiles. Handsomely styled and in all color combinations which have captured the public's fancy on today's cars, the new Tu-Tone pens can be seen at your local stationery stores, priced at \$1.69.



REMOVAL OF SPARKPLUGS is simplified with the new Proto plug-holding socket. Special rubber insert holds plug in place while it is removed, avoids burned fingers, eases the job. In 2 sizes (for $\frac{3}{8}$ -inch or $\frac{1}{2}$ -inch socket drive), sockets also have plug on top for use with open end or box wrench. Made by Plomb Tool Co., available everywhere.



COILTENNA is a new product designed to boost car radio power. It eliminates dead spots, brings weak stations in loud, makes it possible to tune in stations that otherwise might not be obtainable. Installation is easy; no special tools are needed. \$3.95 complete with instructions. Better Products Co., Box 454, G.P.O., Brooklyn 1, N.Y.



DYNO-METER is a dash-mounted driving guide and performance indicator designed to give constant readings on horsepower, acceleration, hillclimbing ability, road grades, condition of brakes, wheel alignment, engine tune, etc. Mounted on the dash of any car in a few minutes. Price is \$3.95 from Almquist Engineering, Dept. P1, Milford, Pa.

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**WATER STAYS
CRYSTAL CLEAR
FOR OVER
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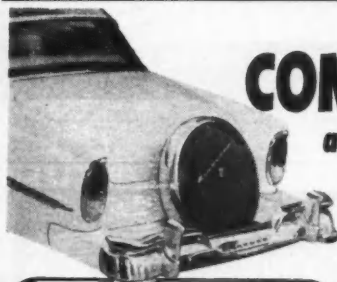
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Beautiful, newly styled luxury kits—now at lowest prices ever, as low as \$48.50 complete! Genuine California kits like these are selling for twice as much elsewhere!

So important to you: NO HOLES TO DRILL IN TRUNK LID OR FRAME! Uses existing holes, braces to frame. Tire carrier is factory pre-assembled.

THESE ARE NOT "FALSIE" KITS. All parts included: splash pan, bumper extension brackets, all-metal tire cover, tire carrier assembly—everything but the emblem. Prime coated. Unconditionally guaranteed!

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Open-Face Kits (minimum drilling):	
FORD 49-54	MERC. 1954
CHEV. 49-54	LINC. 1954
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Chrome tire ring, \$10 extra. Write for information on cars not listed. 25% deposit required. FOB L.A. Postage COD. Calif. residents add 3% sales tax.



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car owner's LIBRARY

DICTIONARY OF MECHANICAL ENGINEERING TERMS

by J. G. Horner

Published by the Philosophical Library, Inc., 15 E. 40th St., New York 16. \$6.50 at bookstores.

IF THE USE of engineering terms stumps you, or if you have need of their understanding, you'll find this dictionary (which is closer to being an encyclopedia) a valuable acquisition to your library. The definitions are broken down into 2 sections: those more commonly associated with other (or all) branches of science and technology, and those associated primarily with mechanical engineering. The dictionary is a 7th edition, the latest one revised by Staton Abbey. Engineers, mechanics, and those interested in knowing whereof they speak will find the dictionary both comprehensive and useful. —W.W.

SPORTS CARS

by John Whaeck Freeman

Published by Random House, Inc., 457 Madison Ave., New York 22. \$12.50 at bookstores.

WITH MORE than 200 photographs (some 30-odd in color) laid out before you in this MT-page-sized book, the price doesn't stagger you as much as it might. Several years went into the development and preparation of this joint effort by Alexandre Georges (top-flight architectural photographer) and Freeman (a sports car enthusiast and free-lance writer).

As with most books on sports cars, a sports car is 1st defined, then sections are presented on British, German, French, Spanish, Italian, and American versions, winding up with a treatise on automobile design (based on the exhibition at the Museum of Modern Art).

For the neo-sports-car fan, the 192 pages of *Sports Cars* give much to pore over; for the aficionado there is enough to whet the flagging appetite. —W.W.

THE MOTOR MANUAL

Published by Temple Press Ltd., Bowling Green Lane, London, E.C.1. Distributed by Robert Bentley, Inc., 8 Ellery St., Cambridge 38, Mass. \$1.50.

THE 35TH EDITION of *The Motor Manual*, prepared by the editors of *The Motor* magazine, is a composite book of basic principles pertaining to the construction and care of the automobile.

Mechanics and laymen alike will find interesting and informative the treatment given the various subjects, such as body design, engine, chassis, tune-up, brakes, suspension, etc. Most of it is basic to any modern car.

The vexing problem of making repairs without a shopful of equipment is well covered and elementary enough that one doesn't have to be a master mechanic to get it.

The usually confounding subjects of carburetors and ignition systems are explained so simply that every car owner will better understand why his car runs as it does.

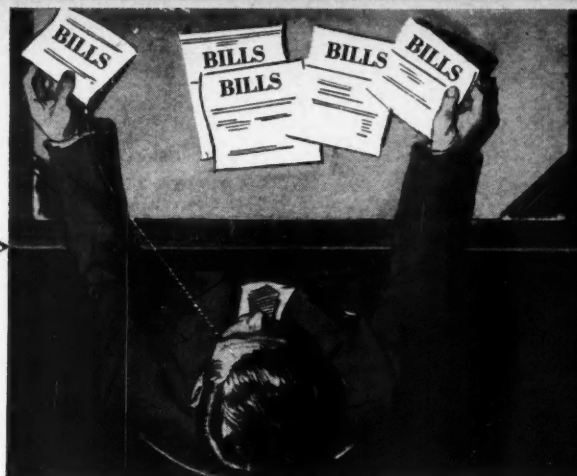
To those who wish to know more about automobiles and increase their motoring pleasure, *The Motor Manual* will be a welcome addition to their library. —W.C.B.

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REDUCES CAR COSTS 3 WAYS!

1. Saves Money on Filter Replacements. One IMPROVED-LIFETIME Filter saves you the cost of more than 100 ordinary filters. If the cost of paper or rag filled elements averaged only \$1.00, you'd save \$100.00 on replacements alone! IMPROVED-LIFETIME's porous bronze wall filters efficiently *all the time*, year after year! Occasional kerosene or solvent rinse keeps it in perfect working order—you will *never* need another!

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3. Saves Money on Oil Changes. Oil stays efficient *miles* longer. IMPROVED-LIFETIME's porous bronze wall screens out all abrasive wear-particles... leaves valuable additives *in*. Materially reduces oil "breakdown." Need for oil changes can be cut in half!

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Enclosed is \$_____ full price, ship postpaid.

- ☐ Enclosed is \$2.00 Deposit—ship C.O.D., plus postage.

GENTLEMEN: Please send me filter(s) checked at left. I understand that if I am not completely satisfied I may return for full refund within 30 days, but may keep the Acid Neutralizer, regardless.

CAR YEAR _____ MAKE _____

MODEL _____

NAME _____

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CITY _____ ZONE _____

STATE _____

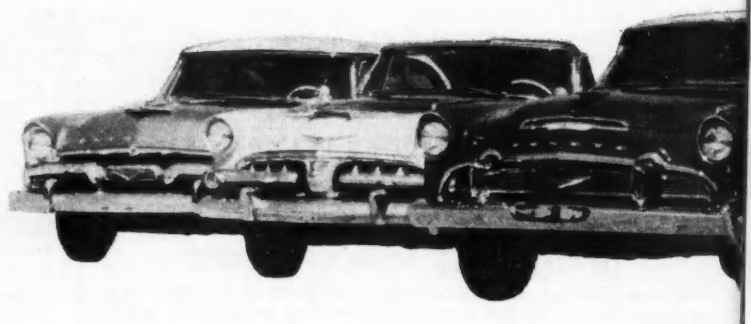
first
time
around



by Jim Lodge, Detroit Editor

PHOTOS BY CHRYSLER PHOTOGRAPHIC

THE '56 CHRYSLER



Most all the '56 Chrysler cars look, at a glance, like their '55 counterparts. Then you see the upswept tails, the low noses. What you don't see is more zip thruout, and better brakes. Inside there are a plethora of changes

HOW IS A CHRYSLER-BUILT CAR similar to a jet fighter, a Gold Cup racing boat, and a big-time race car? The answer to this riddle lies in a silhouette—namely the wedge-type profile.

Virgil Exner, Chrysler Corp.'s director of styling, recognized the similarity between the fastest thing in the air, the unlimited-class water-borne speedsters and the championship-type race cars, and applied the form to the Chrysler idea cars, Flight Sweep I and II and the Falcon. (See "New Motion," Oct. MT, and page 52, this issue.)

Said Exner, referring to this application, "Thus we have taken another important step into the automotive future." But Chrysler also took a step into the very near future—1956—with these low-in-front, high-at-rear cars and the wedge-shape silhouette.

As you look over the photos of the '56 Chrysler lineup on parade at the corporation's multi-million-dollar proving ground, you'll see the wedge concept come to life in each of the new cars. (For now, tho, it's applied almost solely to rear end styling, where the entire line underwent more of an uplift than a facelift.) The photos tell a big styling story, but there's more than meets the eye, for Chrysler has supplied goodies galore for '56—from "Highway Hi-Fi" to a sparkplug-fired car heater for fantastically quick comfort this winter.

LINE



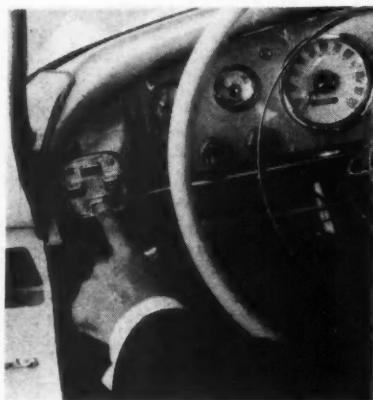


FEATURES COMMON TO ALL



Pushbutton Driving

by Walt Woron



WHEN I FIRST HEARD about Chrysler's revolutionary pushbutton transmission, I formed the opinion that here at last was "a gimmick to end all gimmicks"—something on which to pin sales pitches about "pushbutton driving—change gears with the tip of a finger." After driving the 1956 Chrysler cars (all have it) with this pushbutton control, tho, I'm convinced that it's far more than just a gimmick.

If you're going to put the automatic transmission controls on the dash, why *not* put them where you can *completely* forget them? And when you have to use them, make them so easy to use you still hardly realize you've used them until you've changed gears? That's just about how easy the new shift is to use; if I hadn't been vitally concerned with cramming in lots of knowledge about its operation, I would have hardly realized the cars had transmission control.

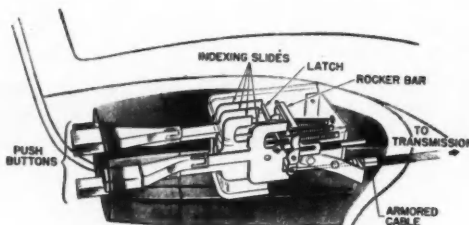
First of all, the location of the controls on the close side of the panel where it follows the wrap-around sweep makes for a comfortable reach. You can actually touch the controls with your fingers while your left arm rests on the windowsill. Four squared buttons protrude from the chrome coverplate, each plainly marked (from top, clockwise) N, D, L, R. At the time of driving, no light was incorporated, but I understand a light shining thru the engaged button will be a standard item to tell you what gear you're in at night.

Gear changes come easily and smoothly; upshifts from L to D, or downshifts from D to L are equally simple. If you're stuck in snow or sand, you can "play" the controls like a poor man's baby grand, using one finger on L, the other on R, rocking back and forth until you're no longer bogged down.

To operate the controls, you push in one (D, for example) with a slight amount of pressure (Chrysler engineers say 3 to 5 pounds, which is practically nil) far enough to make it stick, which puts you into gear. It is designed so that the control for the gear you're in is all the way in, flush with the face of the control panel. It is possible, however, to accidentally (or intentionally) hit one of the buttons and find yourself still in a previous gear. It works this way:

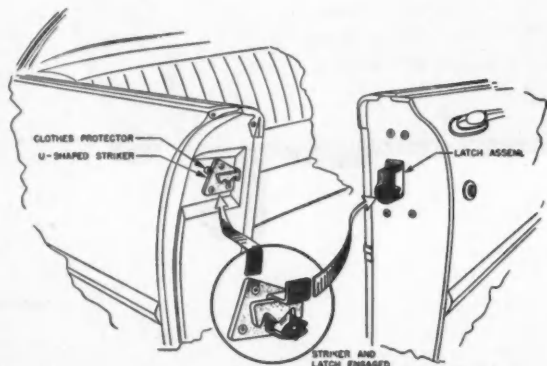
Let's say you make a quick stop at a store, hurriedly punch the N button as you get out, leave the engine running, and, because you're on a level spot, don't put on your hand brake. When you come out it may be because you heard the crumpling sound the front end of one car makes when it plows into another one. The trouble would have been that when you punched the N button, you didn't make sure that it was *in* NEUTRAL, completely disengaged from DRIVE.

It seems reasonable to suppose, however, that if Chrysler has complaints on this score they'll revise the controls so that a slight touch of N will put the transmission into NEUTRAL. This isn't too much of an objection, tho, when you consider that you've got a transmission that does everything *but* think for you.



As you push the button, a keyed index slide acts on a rocker bar to move the cable a slight, calibrated distance. At transmission, cable's travel is relayed by valve into proper gear

Safety Doorlatches

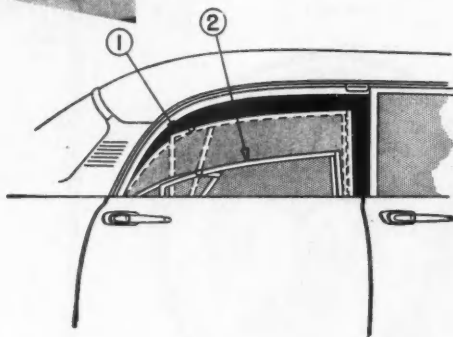


THIS IS ONE FEATURE that no car was denied. Looking over a strip of film of a rollover test, at the proving ground it's apparent that Chrysler's new doorlatch will be a contributing factor in any effort to make safety a selling point. Doors stayed shut after this devastating tumble, with the car sliding crazily on its top and sides.

The way the latch is designed, body warping during a collision won't let the latch pull away from the striker plate. A husky setup, the latch assembly includes a protruding plate which is caught by a bar on the striker as the door is closed. At the forward edge of the bar is a cylindrical clothes protector. Opening mechanism remains roller-latch-type, with new pull-open door handles common to the entire line.

Four-Door Hardtop

INTRODUCED ACROSS THE BOARD for '56, the Chrysler-line pillarless 4-doors incorporate a full-width rear door window with a mechanism that'll keep you guessing. The rear door incorporates a quarter-window pane for that "conventional look"

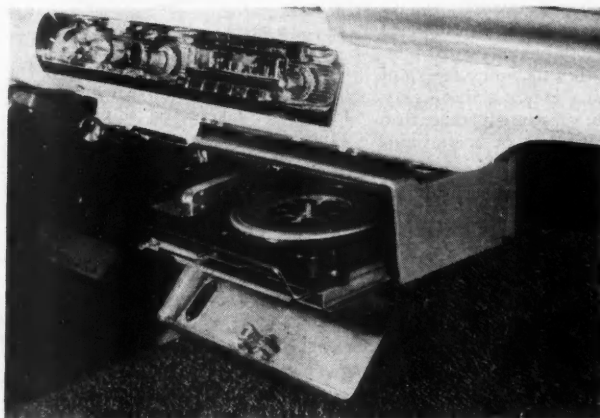


when front and rear windows are rolled up (1, in drawing). But things begin to happen when you crank on that single rear window knob: The small quarter window moves forward and downward (actually the reverse of convertible or 2-door hardtop rear quarter windows that fall rearward and down!), and the main rear door window shifts backwards (2, in drawing) as it starts downward. But get this: the 2 windows remain attached to each other at all times. Dealers will have a busy time demonstrating this setup. (The reason for the roundabout way of lowering a window stems from a successful attempt to provide full door and glass area and still clear the fender well cut into the rear section of the door.) And it's designed to be entirely waterproof. The front door window moves backward as it's rolled upward; the rear window moves forward when it's raised; the 2 meet to form a pressure seal.

Highway Hi-Fi

THIS IS SWEET MUSIC to MT's ears, after boosting up-to-date trends in mobile listening pleasures in the August issue ("New Mood in Mobile Music") Chrysler's "Highway Hi-Fi" is an under-the-dash-board record player developed exclusively for the corporation by Columbia Broadcasting System laboratories. In fact, it's a CBS-Chrysler exclusive all the way thru: Player is CBS Columbia, records are very special discs by Columbia Records, and the whole thing is unique with Chrysler products only. Suspended under the center of the dashboard, the machine plays thru the car radio system, and it's built so that the tone arm won't skip or move across the record under "normal" every-day rough riding (going over car tracks, around curves).

Don't let that "very special discs" throw you. While we don't know at presstime when or if "Highway Hi-Fi" records will be available thru music shops, we do know that you'll receive a widely varied selection of records when you order the unit for your new car. Among the 6 records supplied at purchase time are Broadway's "Pajama Game," Paul Weston playing "Quiet Jazz," and, of course, "Davy Crockett." How varied can you get? You'll have 45 minutes to an hour of entertainment from each side of the 7-inch records. (It's a single-play setup—no automatic changing or flipping.)



New Power Brakes

AVAILABLE ONLY ON CARS equipped with Powerflite transmission, Chrysler's new brake booster still calls for just a tip-toe touch on the wide suspended pedal, but utilizes new mechanical components to achieve this effect in '56. Probably the

1st thing you'll spot when you open the hood of a new Chrysler product so equipped is a large bellows against the firewall. This unit is crux of the system.

Air within the bellows is maintained at atmospheric pressure; when the brakes are applied (a shorter travel was noticeable on the demonstrators) a pedal extension actuates a valve which opens the interior of the chamber to a vacuum source, reducing pressure within the bellows. The bellows collapses (keep in mind the fact that one side of it is anchored to the firewall), and the force of the bellows' movement is applied to the master brake cylinder thru a pushrod.

Chrysler lists as a big safety feature a separate vacuum tank which supplies a pedal boost in emergencies, providing adequate brake assist at all times.

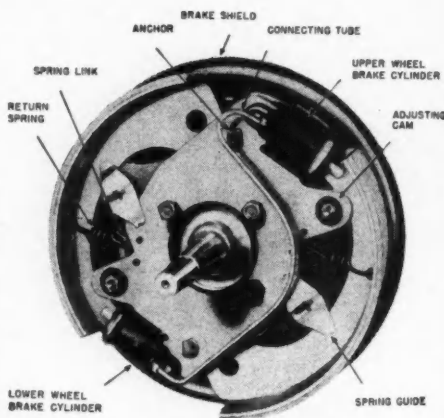


FEATURES COMMON TO IMPERIAL, CHRYSLER, AND DE SOTO

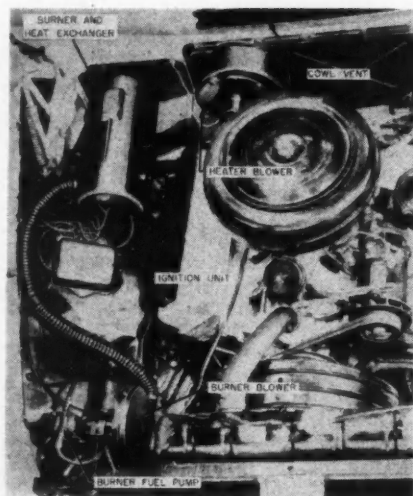
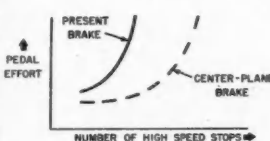
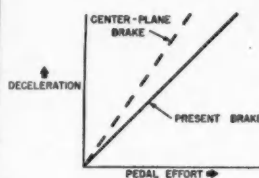
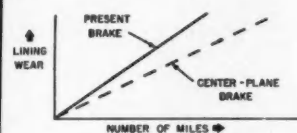
New Brakes

A GREAT IMPROVEMENT over previous service brakes, according to Chrysler statistics. Big points of the "Floating Shoe Center-Plane Brake" are anti-fade characteristics and longevity. Biggest changes over conventional brake mechanism are: Wheel cylinders mounted in the same plane for uniform pressure application at all times; floating-type shoes mounted between 2 swiveling plates at the center-plane of linings; web of the brake shoe is calibrated or contoured in depth to apply equal pressure on the drum thru the entire length of the lining. (Design indicates that Chrysler's brake will put substantially more than the usual 62-64 per cent of brake lining into contact with the drums.)

Linings are now 2½ inches wide (a 25 per cent increase in lining area); Chrysler



quotes 20,000 additional miles of lining life for a major improvement point over last year's brakes. And add to this fewer adjustments and reduced friction heat. This brake writes finis to Imperial's disc brake. (Latter was good mechanically, but suffered from lack of cooling air flow.)

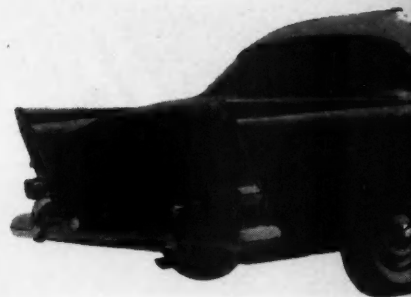


Gasoline-Type Heater

PROBABLY THE HOTTEST THING in heaters to come along in many years, Chrysler's new car warmer will be available as an alternate to standard hot-water heater.

With this unit installed, you'll have a ball explaining how your V8 is running 9 sparkplugs! The heater has its own ignition system, including a sparkplug to touch off the burner and heat exchanger (a thermostat controls the cut-in point). And that's not all: you'll have a second fuel pump in the car (also an integral part of the heater). A separate burner blower force-feeds air to the system for efficient combustion. There's a safety valve to limit temperature in the heat exchanger. Why the valve? Chrysler says that this cold-weather comfort device will hit 100° in 15 seconds —so you know it's pretty potent, as well as efficient. Company engineers point out that with outside air temperature at 0° F, the new heater will stabilize interior temperature at 60-70° in less than 5 minutes. No figures available on the heater's rate of fuel consumption.





THE '56 PLYMOUTH

Engine: For '56, Plymouth has what amounts to a new engine, considering the structural changes made. Now produced at Plymouth's new "Qualimatic" (quality control thru automatic processes) V8 engine plant, the overhead-valve V8 now has a longer block to provide more space between bores and better cooling (and, no doubt, to allow easier boring-out for engine power boosts in the future). Increase in bore diameter pushes displacement to 277 cubic inches from 260 inches in '55. Compression ratio is now 8.0 to 1, was 7.6.

Combustion chambers redesigned to eliminate unwanted "pockets"; this change, combined with recontoured intake ports and larger valves, provides more even air fuel flow, efficient mixture burning. (Certain early production Plymouths will have a Dodge-manufactured engine with a displacement up from '54's 260 to approximately 270 cubic inches. This is an interim measure to tide Plymouth Division over to the point where they can count on full production from their own new plant.)

Longer-reach sparkplugs are now used for wider heat range, better economy. These plugs allow leaner mixture to be

used with no power loss. Entirely new valve train utilizes mechanical tappets. Valve train has lighter-weight components; self-locking screws maintain tappet clearance; valves rotate for longer life. Main and connecting rod bearings are larger this year; oil gallery passages have been reworked for more efficient lubrication. Crankcase ventilation improvement also spells protection for valve train thru more efficient scavenging of rocker cover area.

Standard V8 keeps 2-barrel carburetor; powerpack mounts 4-hole carb with dual exhaust system. Efficiency moves also include new manifold heat control system, redesigned automatic choke control. Both V8 and 6 equipped with 12-volt electrical system; latter engine has 7.6 to 1 compression ratio for '56, a boost from 7.4 to 1.

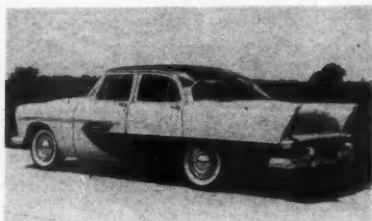
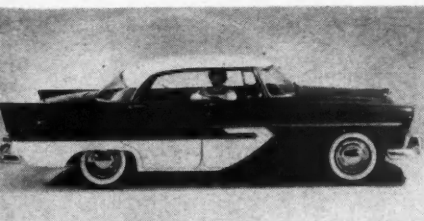
Performance-wise, the '56 V8 should be more than just lively with its displacement increase. We were unable to get true stopwatch readings during the demonstration ride, but times over the quarter-mile and mid-speed acceleration ranges should be well under those of the '55 test car.

Styling: Plymouth's "delta shape" is accentuated by severely slanting tail lights com-

ing down from finned rear fenders. Front-end changes confined largely to grille centerpiece, which sports a large V emblazoned on mouth-organ metalwork. Chrome rub strip (or a maze of strips, depending on model) eventually terminates at slightly hooded backup light.

Interior styling detail of interest is removal of ammeter and oil pressure gauges from the right side of the instrument panel. In their places are heater and defroster controls. Warning lights, not instruments, for ammeter and oil pressure are spaced above and below (and midway between) the large round fuel gauge and engine temperature gauge in front of the driver. Plymouth wagons will have new series identification; will no longer carry Plaza and Belvedere signatures.

Chassis: Unchanged for '56, Plymouth continues with coil springs at front, leaf springs at rear, with Oriflow shock absorbers bolstering ride control front and rear. Ride is like the '55: soft and floating, dip flattening but with some wallowing out of them, and body lean apparent to passengers. The '56 still sticks to the road in corners, but wanders at high speeds.



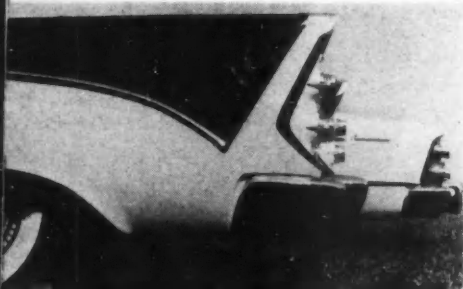
Belvedere 4-door hardtop could snatch style-leader title from other body types, Belvedere convertible and 4-door sedan



Grille (right) makes prudent use of '55 parts, gains width with spaced letters. If you'd rather not dangle your license plate from your front bumper, consider MT's (and Yellow Cab's) idea, page 13



**BRIEF SPECIFICATIONS
ON PAGE 60**



THE '56 DODGE

Engine: Once again offering 3 basic engines, 2 V8s and a 6, Dodge has as its power leader the 315-cubic-inch Super Red Ram, available in Royal and Custom Royal models. Output is unknown at press-time, but, with that displacement (45 inches greater than in '55) and a compression ratio increase to 8.0 to 1 from 7.6 to 1, estimates have to start at over 215 horsepower.

The smaller V8, the Red Ram, remains at last year's 270 cubic inch displacement, but carries the same compression ratio as its bigger brother. Both engines are of the polyspherical combustion chamber design, with single rocker shafts (1955's Super Red Ram had hemispherical chambers, double shafts).

The Super engine, based on '55's 270-cubic inch V8, has a beefed-up crankshaft, new-type piston rings, and a 4-barrel carburetor as optional equipment. Engine mounts are new this year (shear-type, used also on Plymouth, designed to lessen vibration). Both V8s (and Dodge's 230 cubic inch 6, now with 7.6 to 1 compression ratio) have 12-volt electrical systems. Like other V8s from top to bottom in the '56 Chrysler line, the Dodge V8s utilize long-reach sparkplugs.

If the quick stopwatch check of the Dodge convertible we drove can be taken as indication of '56 performance, it'll

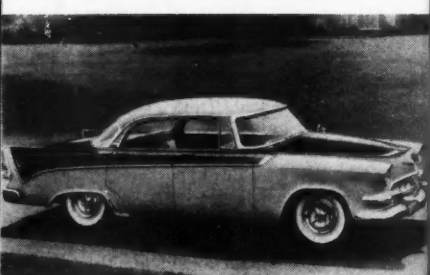
be greatly improved over the '55 models. **Styling:** Dodge will be a big contributor in changing the traveler's pastime of guessing out-of-state license plates at a distance to guessing which rakish tail light assembly belongs to which Chrysler-built car. Here again, emphasis is on rear-end restyling; front-end change is limited largely to grille centerpiece, which protrudes more than it did in '55.

One of the most striking effects is found on the more deluxe 2-toned Dodges: a curving sweep of chrome angles downward toward the base of the tail light housing, then shoots rapidly upward to parallel the molding around the tail light. Two-toning, of course, heightens this sweep and the angularity of the upswept fender. Interiors continue in highly contrasting (but compatible) colors with interesting upholstery weaves.

We were happy to note that distortion at the sides of the windshield on the Dodge (and other cars in the line) has been all but eliminated. As we understand it, better production technique is the reason.

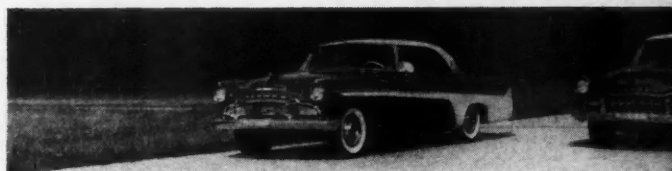
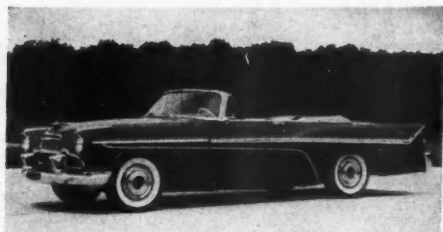
Chassis: Components unchanged, with Oriflows playing their part in conjunction with coil springing up front, outboard-mounted leaf springs at rear to give it the same soft ride and road-hugging ability it had in '55. Dips are taken with no oscillation; body lean is still uncomfortably high.

Full line of Dodges provides a suitable car for nearly all buyers, but most will be tempted by newly designed 4-door hardtop (center)

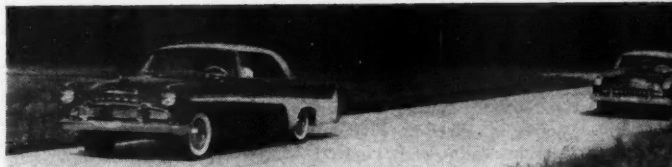


BRIEF SPECIFICATIONS ON PAGE 60

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THE '56 DE SOTO



They started out together, but the '56 Firelite left its '55 counterpart behind like this in our 1st drive in the new one

Engine: DeSoto's engine design, like the larger Chrysler engines, has hemispherical combustion chambers, dual-rocker-shaft valve train setup. At 291 cubic inches in '55, both Firelite and Firedome now have 330 cubic inches displacement, 8.5 to 1 compression ratio. This power increase (unavailable at presstime) was apparent in the performance of the DeSoto hardtop we drove during the press preview. Better mileage would come as no surprise, either.

The more powerful Firelite engine mounts a 4-barrel carburetor, the Firedome carries a 2-barrel carb; dual exhausts are optional on either engine. Primary

changes for '56 include the new long-reach sparkplugs, 12-volt electrical system, larger valves, redesigned intake manifold ports.

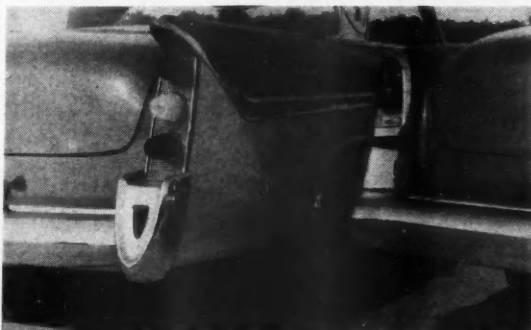
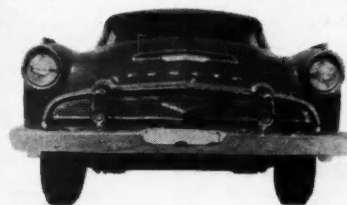
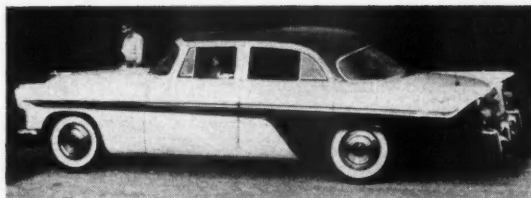
Styling: From front (stamped metal grille-work replacing familiar "teeth") to rear (3-barreled tail light setup, hooded-and-high-peaked rear light housing, faked exhaust ports) DeSoto represents largely unrestrained restyling for '56. "Wedge-shaped" concept accentuated by upward-slanting chrome strip on rear fender. Up front, parking lights are no longer at the outer edge of the grille; they now rest uneasily in the grille guards. Sweeping look of "motion while standing still" exempli-

fied in 2-door hardtops, which are 3 inches longer at the rear than in '55.

Interior styling remains unchanged, with double-cowl arrangement. Round dials have black letters, white background.

Chassis: New last year, DeSoto's chassis layout follows others in Chrysler line, with coils forward, wide leaf springs at rear. Here, too, Oriflow tubular shocks aid ride control, directional stability. Good riding qualities, not too much heel-over in turns. Roadability rates as in '55: genuinely good considering softness of ride, no wind wander, but with some tendency to feel loose in sharp turns taken at high speeds.

BRIEF SPECIFICATIONS ON PAGE 60



Flamboyant, uplifted rear view makes '55 look oddly mousey by comparison





Engine: New Yorker Deluxe engine boasts 354 cubic inch displacement, 9 to 1 compression ratio (Firepower V8 was 331 cubic inches with 8.5 in '55); no torque or horsepower figures available at press-time (due not so much to Detroit's cloak-and-dagger security policies, but to ever-possible last-minute engine specification changes). Acceleration on our convertible demonstrator seemed to be well above that of our hot '55 road test car.

Smaller Spitfire engine in Windsor series is related to Plymouth, Dodge V8 design with polyspherical combustion chambers, single rocker arm shaft setup. This engine assumes '54 Firepower's 331 cubic inch displacement and 8.15 to 1 compression ratio. Both V8s use long plugs, 12-volt electrical system.

Styling: Unlike other cars viewed at the Chrysler Proving Ground, Chrysler drew more glances to its front end styling. Generally horizontal in effect, V-shaped, fine-lined grille uses moderate vertical strips to break the monotony. Impressive is the word for the front bumper tips; winged shape forwards the Forward Look, but, more important, the husky extensions will afford excellent protection to the front fenders. Entire front end is carefully formed: grille, parking lights, and bumper "wings" compliment each other.

The Chrysler's rear end is perhaps less striking than other Chrysler products, yet greatly changed from '55. New Yorker Deluxe rear fenders carry vertical trim strips high toward the rear. Tail lights,



Dart-shaped Chryslers are separated in '56 by trim detail, interior finish, and power. New Yorker Deluxe, bottom, carries vertical chrome trim along upper rear fender, has narrower grille bars, peaked-and-painted headlight rims. Windsor, at top, has same body rub strip, same tail lights and rear bumper; its grille is bolder, heavier

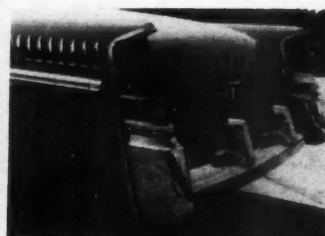


shrouded at the top by a high peaked fender, are more on the conventional side. Rear bumper is the epitome of simplicity, with end pieces coming up under the tail lights in a solid mass of bright metal. Use of large lettering across the rear deck seems uncalled for.

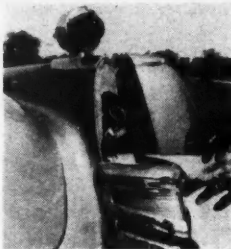
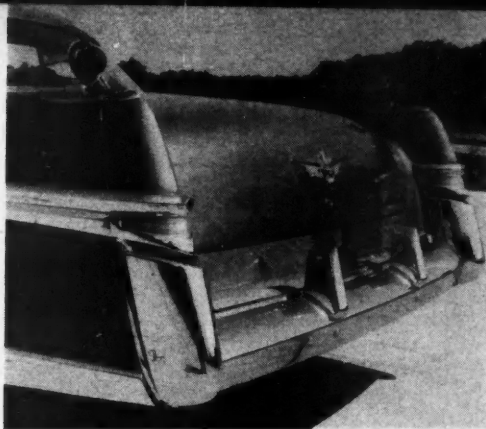
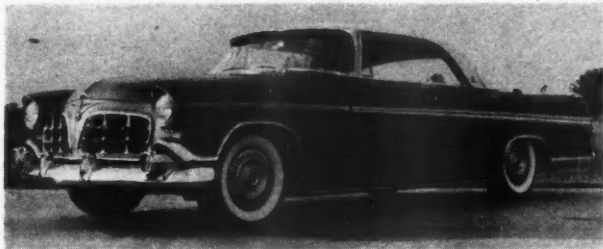
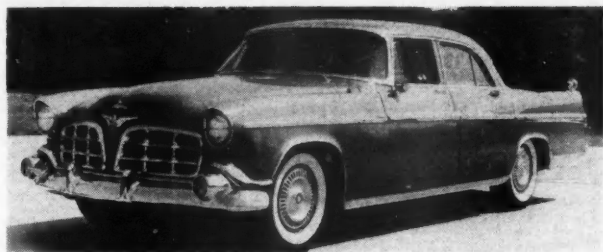
Chassis: Completely revised to take the '55 body, the chassis components of the New Yorker Deluxe and Windsor are unchanged in layout, carry out the corporation's suspension to the top of the line. Shock-absorbing quality of Chrysler's 126-inch wheelbase chassis is excellent. Extremely quiet, jar-free ride; noise is prac-

tically nil. Like last year's car, the '56 again demonstrates a wide gap between the pitching, rolling '54 ride and the soft, but more stable ride inherent to the Forward Look era. Chassis was not changed to accommodate these body dimension changes: 2.4-inch longer New Yorker Deluxe 4-door sedans, 5.4-inch longer 2-door hardtops, nearly 2 inches more width across the line. Windsors, tho on the same 126-inch wheelbase, are almost 2 inches longer overall than in '55, with the 2-door hardtop extended 4.8 inches more than in '55. Windsors, for some unexplained reason, are 0.3 inch narrower than last year.

THE '56 CHRYSLER



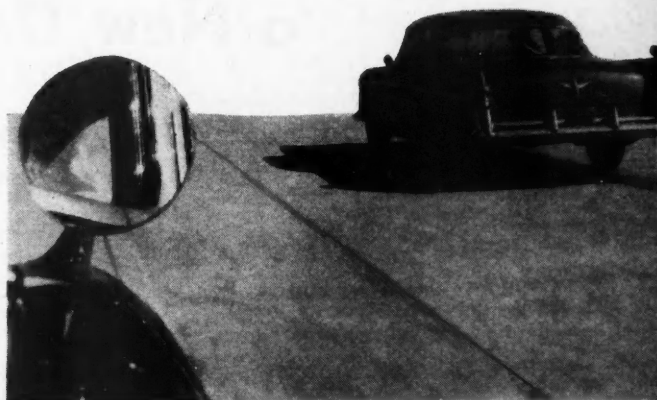
BRIEF SPECIFICATIONS ON PAGE 60



Engine: Duplicates the New Yorker Firepower V8.

Styling: No front-end facelift for the Imperial leaves it with a distinctive 2-piece grille (which it shared last year with Chrysler's semi-split metalwork) for '56. To the rear, the Imperial picks up the "dart" form with a climbing fenderline, on top of which is mounted, naturally, the unique "microphone-like" tail light. A subdued chrome rub strip leads to a wedge-shaped backup light. The rear end is finished off with the New Yorker Deluxe's bumper, rather than with the '55 Imperial's handsome interpretation of integral exhaust ports. For this year, exhaust is routed almost to the inner edge of the rear bumper, without a trace of pipe tips visible to dual-exhaust-port lovers (true of all cars in the Chrysler line).

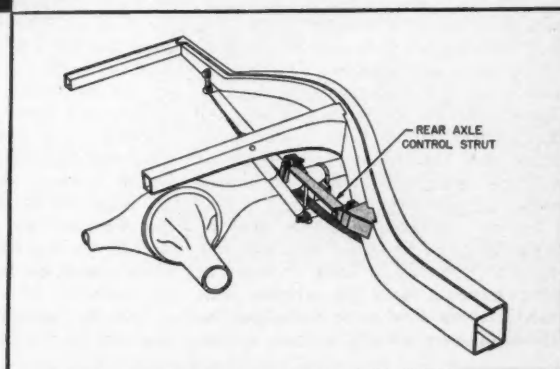
An Imperial exclusive is the gas tank filler. Pushing the right-side reflector button above the backup light releases a catch that lets a spring-loaded door swing to the side, exposing



THE '56 IMPERIAL

the filler-neck within the fender. Not entirely new, but good. **Chassis:** The single change in suspension components for the new Chrysler line is in the Imperial rear-end layout. For '56 it has a modified Hotchkiss-type drive with a pair of rear axle control struts running from the top of the axle rearward to the frame. About 2½ inches wide, the leaf-spring-like struts give, in effect, an increase in rear spring rate, and their position limits the travel of the differential case (allowing a smaller tunnel to clear the housing). This strut installation serves to take some torque off the rear springs, permitting the use of soft suspension units with more powerful engines; in addition, an advantageous by-product (and one that was noticeable in our demonstration Imperial) is resistance to rear-end sway and body roll.

BRIEF SPECIFICATIONS ON PAGE 60



CHRYSLER STORY CONTINUED ON PAGE 52

MOTOR TREND/NOVEMBER 1955 27

PHOTOS BY AL KIDD



DARLINGTON

a New Detroit Diet

Chevrolet feasts while others take a close look at their recipes . . . Look for more seasoning in the future

by Al Kidd, Sports Editor

FOR YEARS Ford and Chevrolet have been slugging it out toe to toe in salesrooms across the country to decide which is the more popular car. At Darlington, S.C., in September, the same 2 makes squared off in a pitched battle to decide which was the faster car on a 1 $\frac{3}{4}$ -mile speedway. With nearly 450 miles of the Southern 500 completed, the battle was still going strong.

Little Joe Weatherly had put a hot Ford into 1st place with spectacular driving and was trying to hold off a whole pack of onrushing Chevrolets headed by Herb Thomas, Jim Reed and Bill Widenhouse. Darlington Raceway's track announcer asked the crowd what it thought. "How many for Ford?" he asked—and then, "How many for Chevy?" The thunderous roar that followed the name of each make was a louder echo of the hushed gossip that preceded the race.

For the 1st time since the days of Duesenberg and Stutz, the American racing public seemed a lot more interested in what car would win a big race than what man. True, the Flocks, the Bakers and the Thomases were getting a share of the

spotlight, but at Darlington the words Chevrolet, Ford, Buick, Chrysler and Oldsmobile were being mentioned a lot more frequently. And, as might be expected, the 2 most-talked-of names were Chevrolet and Ford. Both factories had fingers in the Darlington pie, a situation that could best be likened to big-time college football—if obvious support was impossible, every imaginable assistance could at least be available. It was.

The groups of mechanics, representatives and company brass clustered around the Ford and Chevrolet pits were not on hand just for a holiday. And just as the fans and factory people talked of makes, so did the drivers themselves. Chevrolet drivers said that "*they*" saw a win for Chevrolet, and a Ford driver said that "*we*" had qualified faster than Chevy. The argument lasted right down to the last 50 miles, when Weatherly's Ford went out of the race and Herb Thomas came on to win his 3rd Darlington 500 with 6 other Chevrolets behind him in the top 10 finishers.

Like the fans, drivers, and factory representatives, let's take a good look at the

cars themselves, which were the real stars.

Chevrolet, with 24 starters out of a field of 69 cars, stood a good chance to win on sheer concentration. But there was a reason why so many drivers chose Chevrolet. The Chevy seemed to be the best combination of speed, handling and staying power; and it proved to be just that. Close factory support (Chevy's Mauri Rose was on hand to help drivers and work in the pits of Thomas and 2nd-place winner Reed) also made it advantageous for drivers to choose Chevrolet. The Chevys in the race were rated at 195 horsepower (regular powerpack plus Corvette camshaft and valve springs). Bill Widenhouse showed their speed when he qualified at 108.522 mph and managed to lead the race shortly before the midway mark.

NASCAR short-track champion Jim Reed thought Chevrolet's handling was outstanding—he said he was able to do things with the Chevy that he never thought would be possible on the fast but tricky Darlington asphalt. Along with this good handling went meticulous driving on the part of Thomas and Reed; this in turn led to one of the most important factors in

Chevrolet's win—tire wear. While other cars were throwing chunks and huge sections of rubber from their tires, the Chevrolets, altho they made 4 stops each for fuel, ran the entire 500 miles on the same original set of Firestone Super Sport 170 tires.

These new Firestones were hard to get at Darlington and the Chevys made good use of the ones they had—but even these fine tires wouldn't stand up under some of the heavier cars. The 1-2 win by Thomas and Reed was a deserving one, even tho frequent yellow flags kept the winning speed down to 92.281 mph. The other Chevrolets ran well, and most of the starters finished. In short, Darlington goes down as a decisive Chevrolet win.

out of the race. But then Weatherly staged a terrific single-handed effort for Ford. He was among the 10 leading cars from the outset, got the lead at the halfway mark, and stayed there (often lapping at 106-7 mph) until a blown front tire caused him to spin out with only 50 miles to go. The rest of the Fords (one of them finished 5th), while fast, were obviously not as well set up or manned as the 2 driven by Turner and Weatherly: near glory for Ford, a big scare for Chevrolet.

As the Novis have been to Indianapolis so the Chrysler 300s were to Darlington, particularly the Kiekhaefer 2-car entry (the only other 300, qualified at a good 110.713 by Dick Rathman, dropped out of the race while running poorly). But

of the race after he had taken the lead in the 1st 100 miles.

Fonty was, apparently, all out to win, while Tim was content to stay in the top 5 and be sure of finishing (to protect his newly acquired Grand National point leadership). Then too, Tim's 300 soured considerably toward the end of the race; this, coupled with his numerous pit stops, made his 3rd place finish a respectable one. The 300s were the hottest cars on the track (altho the fast Fords pushed them) and would have had a fine chance to win had their numbers been greater.

After the Chevys, Fords, and Chryslers the car that pollsters had given the best chance to win at Darlington was Buick Century, with 7 (Continued on page 68)



Racing is always a test of tire performance: Fonty Flock's right front tire (left), a Firestone Super Sport 170, after 90 laps; Buck Baker's Deluxe Champions, after 65

Closest competitor to Chevy and the provider of the biggest surprise (and heartbreak) was Ford. In a serious factory attempt to stem the Chevrolet tide, Ford announced on the eve of Darlington qualifying (August 25) that a new "high output" (or police interceptor previously unavailable to the public) engine would henceforth be on the market. This engine had 292 cubic inches (3.75 bore and 3.30 stroke), a 9.2 to 1 compression ratio, and put out a potent 205 horsepower. With this engine, Ford came very close to stealing the entire Darlington show. Altho there were several of these new models on hand, the real threat came from a team of lavender-colored cars (appropriately designated on their hoods as "wild hogs") sponsored by a North Carolina Ford dealer. With a whole entourage of Ford mechanics (headed by pit chief Buddy Shuman) and 2 top drivers in Curtis Turner and Joe Weatherly, these cars looked good from the start. Both qualified at over 109 mph (the fastest Chevy was a mile an hour slower).

In the race itself the Ford threat became immediately evident when Turner bullied his way into the lead and stayed there until a hard brush with another car broke a tie rod on the Ford and took him

Fonty and Tim Flock driving the Kiekhaefer entries drew most of the pre-race interest, right from the time the cars and volumes of spares and equipment were unloaded from the Mercury Outboard vans. Tim set a new qualifying mark at 112.041 mph. Fonty turned 112.781 mph, but Tim's record stands because Fonty's attempt was for only 2 laps (because of hurried qualifying during rainy pre-race attempts).

These times are remarkable when one considers that the track record in a championship car is held by Bob Sweikert at 132.289 mph.

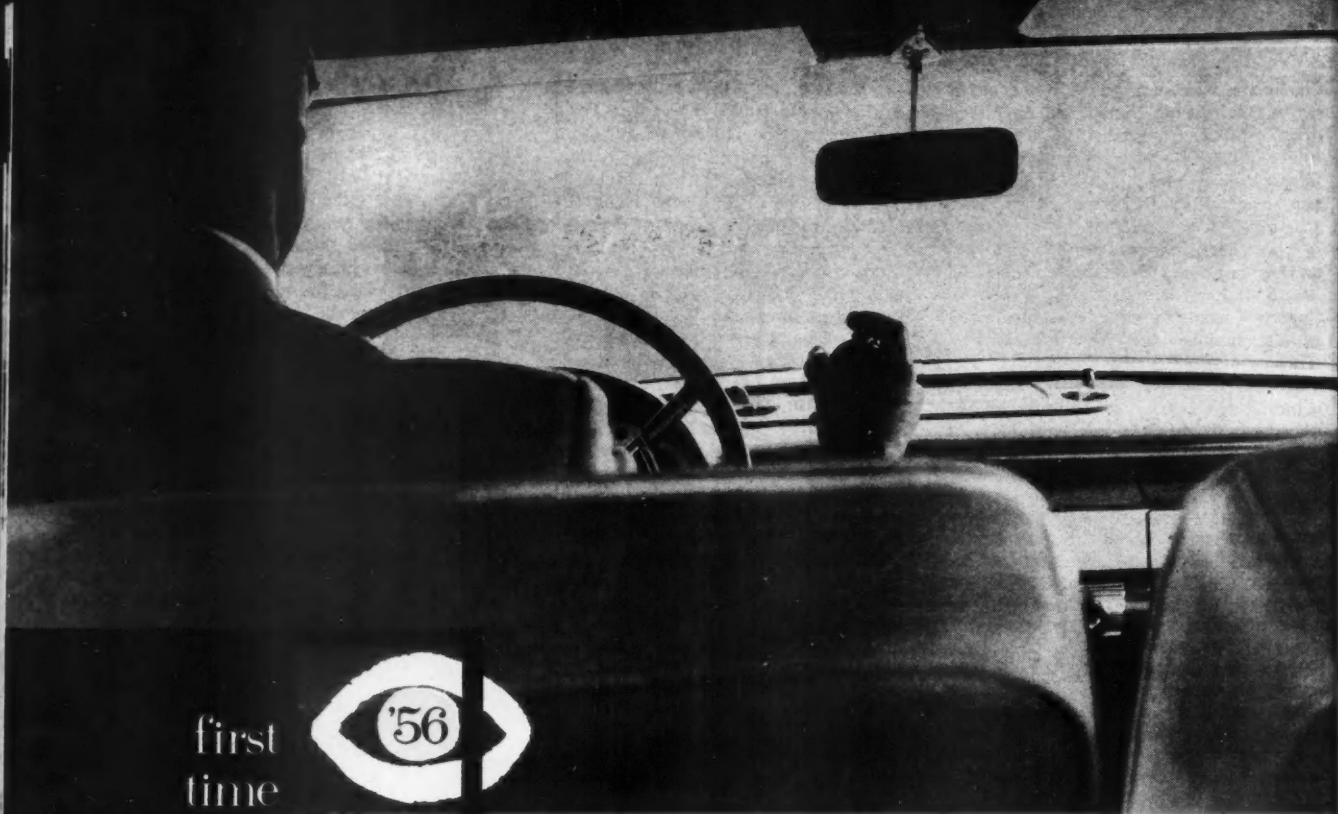
Another source of wonder was pre-race pit-stop practice by the super-efficient Chrysler pit crew with Mr. Kiekhaefer himself as the obvious NASCAR Neubauer. With their fast-lift hydraulic jacks and pneumatic lug wrenches (one for each wheel) the crew was changing 4 tires in under a minute during practice. The practice was worth a lot more than a show to the spectators since, unlike the Chevrolets, the heavy Chrysler 300s were very hard on tires. Even with the new Firestones, the 300 tires were not lasting very long—after only 90 laps Fonty Flock's car came in with gaping portions of missing rubber, and it was a blown tire that put Fonty out



Here is the exhaust system on Flock's Chrysler 300. This method prevents accidental loss of the tailpipe during race



All contestants must pass inspection. Driver Lee Petty watches as members of technical committee check his camshaft



first
time
around



THROUGHOUT 1955, Ford and Chevrolet have run a Nashua and Swaps series of races for sales leadership. Ford was ahead in registrations during the 1st half of the year; since August, Chevrolet has moved imperceptibly but inexorably ahead. If you are placing any bets on the final outcome, don't use race track rules, because the simple fact of the matter is that Chevrolet can currently outproduce Ford by a ratio of about 44,000 to 37,000 cars a day at maximum overtime tempo for both.

Meanwhile, Ford stylists and engineers have been working unpaid overtime of their own on 1956 models. They came up with a fair-sized facelift, especially when compared with past performance between major tooling changes. This is most apparent in the engine department. Police departments that own 1955 "Interceptor" Fords on the justification of a rare all-out chase had better budget a trade-in, because a 1956 Fairlane with its stock 292-cubic-inch, Thunderbird-based powerplant promises to be most familiar when viewed from the rear of its standard dual exhausts.

We drove one on Ford's Dearborn proving ground well prior to introduction date. Performance is the biggest story, as the chassis remains fundamentally unchanged. Full-throttle accelerations (starting in Low range and then upping to Drive at about 10 mph to avoid the lag inherent in the throttle

kickdown feature) produced a startling the approximate time of 9.5 seconds from 0 to 60. If this figure stands up in our subsequent full-scale road tests, it will best the best of 1955, regardless of price or advertised horsepower.

Our test car was a standard Fairlane 4-door sedan equipped with Fordomatic. Mechanically, it was a '56 model with all the new rotating parts installed under 1955 trim. We often encounter this situation when we bring you 1st impressions of new cars, because to be current, we must do it well before announcement time. About all that exist at that time are a car like the one we drove plus a few hand-built show prototypes that are practically impossible to drive.

Our other usual acceleration checks confirm the fact that Chevrolet will have to guard its claim to drag-strip laurels in 1956. Ford's 0-30 mph accelerations check out consistently (as they should) with 30 to 50 mph figures, averaging slightly over 4 seconds; 0-60s mate with the passing range, for 50-80 likewise corresponds in the neighborhood of 9 seconds. Performance like this shows that at last Ford has found a way to

get the utmost out of its many cubic inches.

The big engine is dubbed "Thunderbird Y8" and is standard in Fairlanes and wagons. It is last year's powerpack plus; if you want to add to it, you had best inquire into McCulloch blowers, Edelbrock manifolds, or other accessories available thru some Ford dealers but not necessarily sponsored by the factory. The family V8, (excuse us, "Y8") is a 272-cubic-inch job standard on Mainlines and Customlines. A slightly more powerful (than '55) overhead-valve 6 is optional at less cost on all models. Automatic chokes are standard on all V8s. Carburetors are newly tailored to engine-transmission combinations.

As of presstime, Ford is sitting firmly on horsepower and torque. Their biggest displacement is the same as last year's Mercury, with the same bore/stroke ratio of 0.881. Compression ratio varies slightly, depending on whether you choose Fordomatic (8.4 to 1), overdrive, or 3-speed (8 to 1 each). This 10th of a ratio less than the 1955 Montclair is within factory tolerances, one way or the other, so Ford *should* eventually claim no more than the '55 Mercury's rather optimistic 198 horses. We predict, however, that the ad-

The glamour will strike you before anything else. The power will impress you next. But best of all is the safety

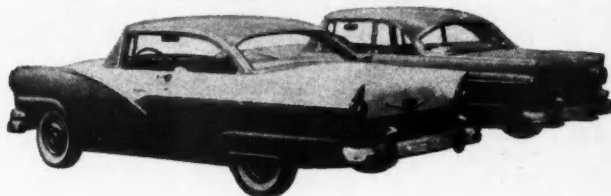
by Don MacDonald

PHOTOS BY FORD PHOTOGRAPHIC

the '56 FORD



Hardtops are lower by 1½ inches. Ford is only division to keep transparent roof



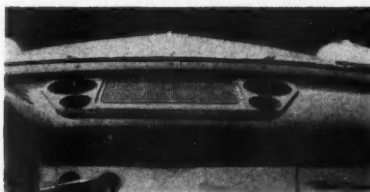
vertised figure will nudge over 200, based on certain shenanigans at the recent Darlington "500," described back on page 28.

Cornering a Ford was a pleasure in 1955, and since no chassis or suspension changes have been made for the new year, the same statement still holds. The usual compromise between understeer and oversteer has been maintained, even tho the shocks have been revalved on the softer side. The car is at its best when barreling down a rough and slithery gravel road. The only way we can describe it is to say that a Ford never tries to drive the driver.

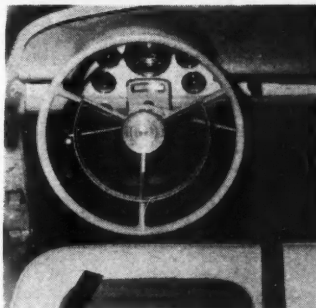
Running-gear changes are confined to a beefed-up differential housing and for manual shift models, a tougher clutch to absorb the added engine power. Ford has gone to a fixed anchor brake design similar to Mercury's, enabling one-point adjustment at the "starwheel" for manufacturing and servicing ease.

Styling changes involve a new grille, side trim, and rear-deck treatment. Roofs on conventional 2- and 4-door sedans have a ¾-inch-lower crown. The Fairlane series offers all of Ford's many variations on the 2-door hardtop, including smooth roof, transparent roof, and tiara roof. Later in the year, a 4-door hardtop will be available, but meanwhile the very complete Fairlane stable is augmented by conventional sedans and a Sunliner convertible.

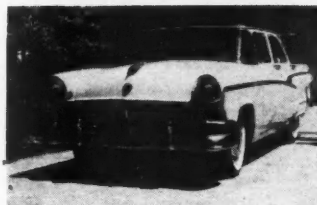
Ford (as well as Plymouth) has taken a big step forward in separating the wagon line from all other models. Henry Ford has no less than 6 varieties, each with a different name scrolled on the side. There is a sleek new 2-door, 6-passenger Parklane, standard and deluxe Ranch Wagons (also 2-door), Country Sedans for 6 or 8 passengers, and the Country Squire with imitation wood panels combining metal and Fiberglas. (Continued on page 60)



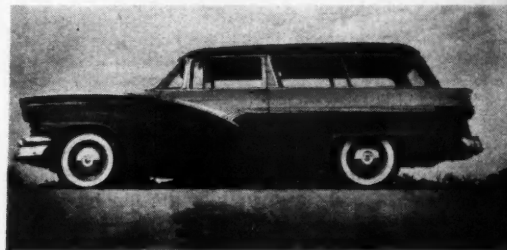
Cowl-mounted air conditioner operates with these neat knobs, no longer clutters rear trunk space



Large hood over circular instruments can be padded, along with remainder of panel, with bruise-preventing plastic foam



Customline sedan has glitter of last-year's Fairlane, profits from its lower roof



Parklane, a super-luxurious new Ranch - Wagon - based model, may presage entirely new, separately identified wagon line for near future

Readying for another big sales year, popular Mercury runs softly, carries a big engine, retains handling that won an MT award for '55



by Walt Woron and Don MacDonald

the '56 Mercury

TAKE A CAR that MOTOR TREND selected as the best-looking 4-door sedan of 1955 and one of 1955's 2 best-handling cars, add just enough seasoning, and you'll have a 1956 Mercury. What Mercury did with their '56 model is what you can normally expect from a car that was completely redesigned the year previous: identification changes (new placement of chrome here and there), refinement of some engineering features, new and/or additional colors and trim, and a power increase. The only trouble is, the American motoring public is getting to be a pretty expectant, and even demanding, lot; they want to reap manifold changes each year, which just isn't practical economically.

In driving the '56 Mercury, the most noticeable thing with respect to the '55 model is the upping of performance. Last year's test car was a peculiarity in that it combined the middle-size engine (188 horsepower) with dual exhausts, which normally came only with the largest (198-hp) '55 engine. At the Ford Proving Ground this year, Don MacDonald and I drove a Montclair sedan with 225 hp (the highest-powered '56 engine) and Mercomatic transmission.

Altho it seems as tho the rough acceleration figures we got should be better with this higher horsepower, they are close to what is being obtained by factory test crews. Using stopwatches and estimated speedometer correction, we went from standstill to 60 mph (65 indicated) in around 11 seconds, from 30 to 50 (32 to 54 indicated) in around 4½ seconds, and from 50 to 80 (54 to 85 indicated) in around 12 seconds. Our more accurate figures for the '55 car ran, respectively, 11.4, 5.3, and 13.8; these figures were good enough to make the Mercury 2nd best in the low-medium price class, so the new marks should certainly keep it as close to the top in performance as it was in the '55 tests.

Mercury's engine options this year are once again tied to your choice of transmissions. Three speed is standard and overdrive optional in Custom, Monterey, and Montclair series. With either choice, you are limited to an 8 to 1 compression ratio, 210-hp (at 4600 rpm) engine. An 8.4 to 1, 215-hp version is standard on Customs equipped with Mercomatic, but *not* optional on any other model. The 225-hp 9 to 1 powerhouse is standard on Monterey and Montclairs with automatic drive and optional on *any* other model similarly equipped.

Even the low engine on the horsepower totem pole (a pagan pantheon to both sales managers and Eskimos) is substantially more powerful than last year's Mercury top of 198. A glance at the specifications box (page 62) shows that it stems from a bigger bore and a longer stroke, following the old theory that there is no substitute for cubic inches. This is the only basic change from last year's engine, aside from the increases in compression ratio.

A detail partially responsible for fixing engine-transmission combinations is a longer-dwell cam used on engines coupled to Mercomatic. This, combined with a slightly advanced spark setting, overcomes any tendency to starve for fuel and air

while powering through the automatic gear change cycle. The other reason, of course, is that it is just not worthwhile to retool for manual transmissions newly designed to take today's greater power outputs. Eighty-five per cent of Mercury's 1955 production was equipped with Mercomatic, and this year the figure should climb even higher. As it is, service managers stay up nights worrying about warranties on 210 horsepower feeding into a manual gearbox that despite interim beefing-up was originally designed to absorb about half that amount.

Like last year, the Montclair has a lower roof line which affects your comfort in getting in and out; it's not at all like shoehorning into a sports car, but you do make some sacrifice in headroom for that more esthetic-looking low roofline. Once inside, you won't be bothered unless you're 6-foot-plus.

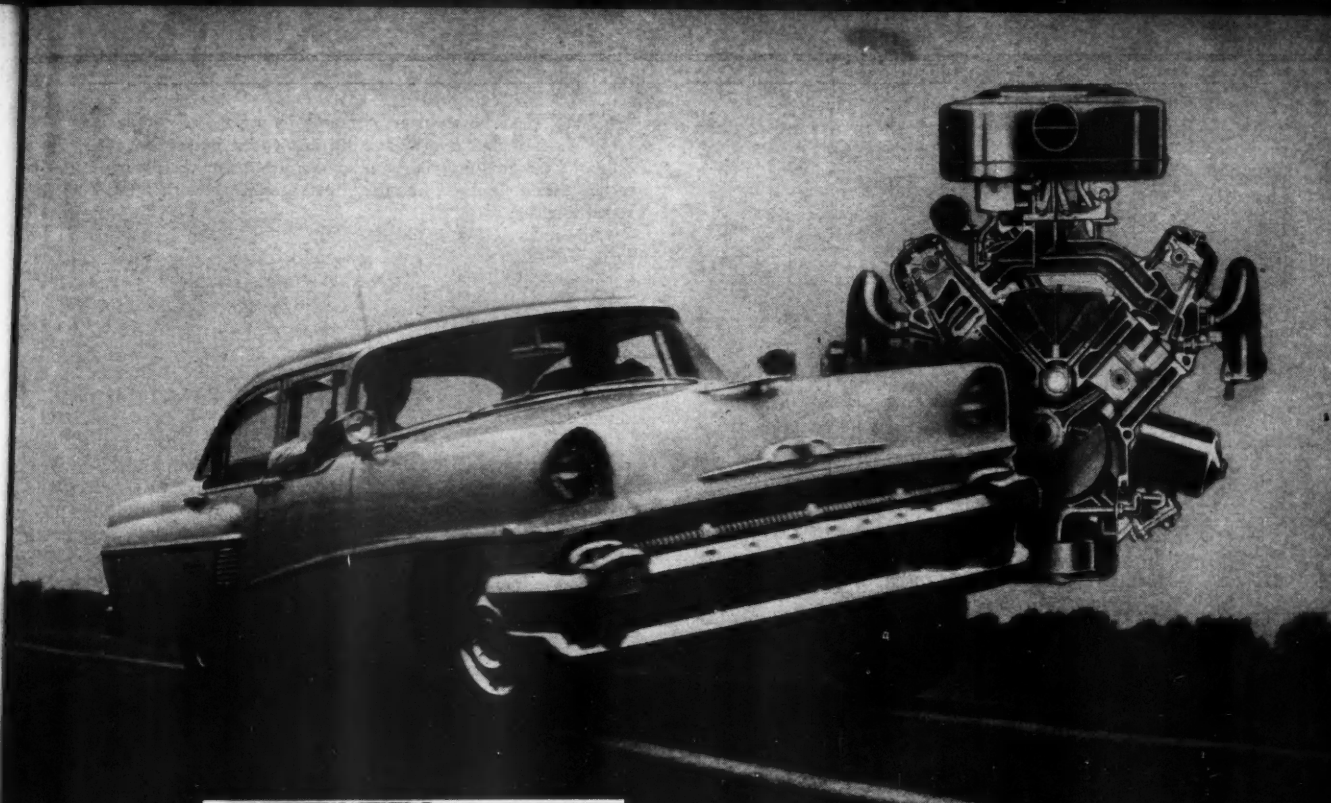
The low-silhouette Montclair is available in sport sedan, hardtop coupe, and convertible form. The sport sedan also comes in Monterey dress, distinguishable by its lack of chrome-plated belt line and rocker panel, and slightly less luxurious interiors. Other Montereys include a conventional 4-door sedan with a graceful new roof panel

(Continued on page 62)

Intrusion into low-price field is sparked by good-looking, chaste Medalist. Car can be had with any engine option, any or all extra accessories



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Next-to-lowest-priced Custom line differs from glossier Mercs mainly in interior trim. Two-tones a la mode and extra. That's the '55 at the rear



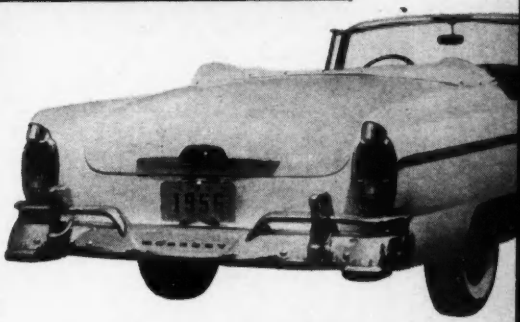
Subtle '56 facelift involves neater top to grille, "Flo-tone" side trim, new nameplates. Gravel guard has been re-etched, roof crown on sedans lowered 3/4-inch



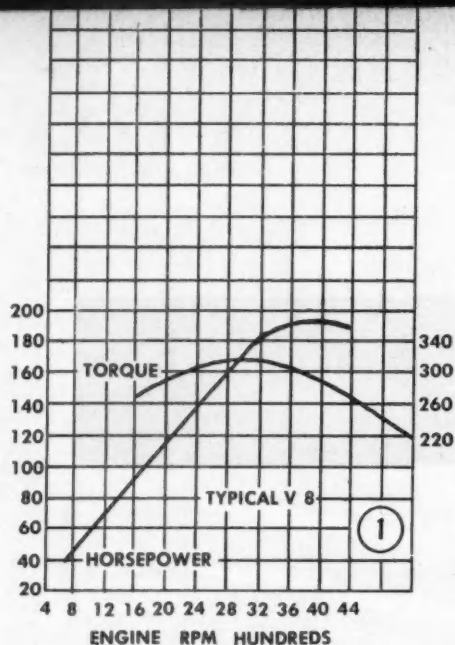
Merc's hardtops sell best of all the line. Monterey lacks Montclair's chromed saddle and rocker trim



Top-line Montclair sport sedan (left) won MT's best-looking vote in '55, looks even better in current dress. Most frequent view of Montclair convertible (right) shows revamped tail-lights and standard dual pipes

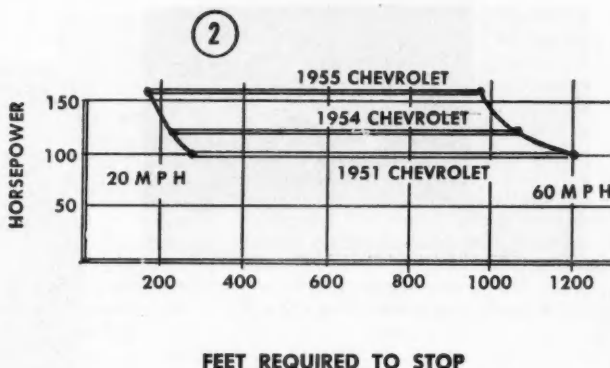
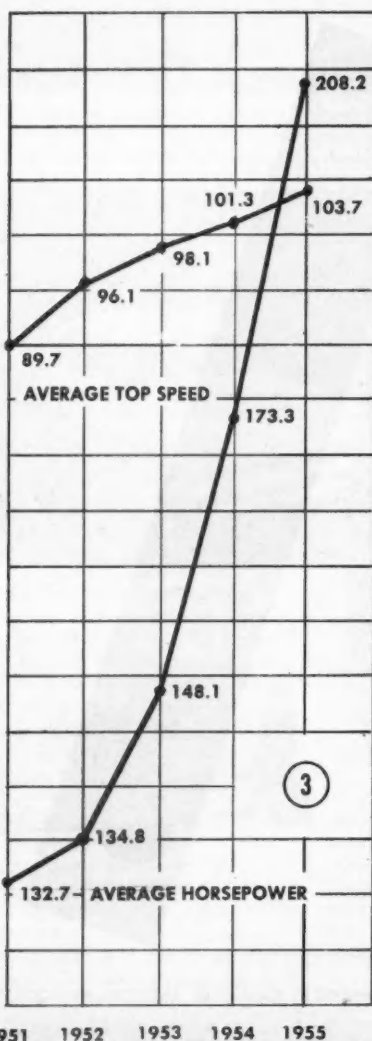


PHOTOS BY JOE FARKAS AND FORD PHOTOGRAPHIC



IS HORSEPOWER DANGEROUS?

by John Booth Engineering Editor



WHY HAS horsepower become such a bone of contention? What makes a man usually known to possess very few opinions on anything become so definite when discussing the rather ancient method of rating the theoretical work unit of a steam engine?

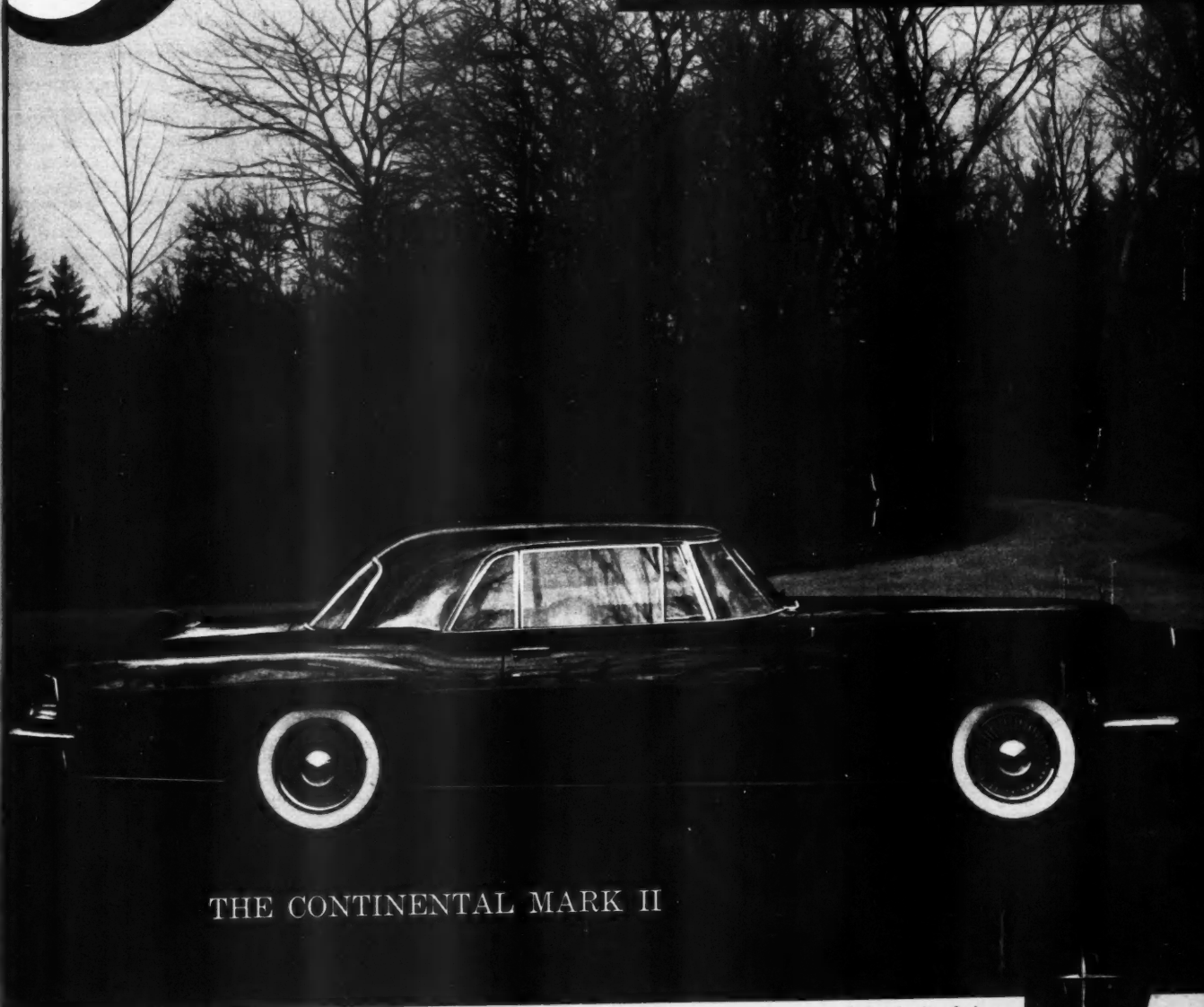
Only since the late 1940s has publicity in one form or another made horsepower a yardstick when discussing automobiles. Advertising and sales departments, confronted with a sound and prosperous upturn in business, were quick to recognize the obsolescence of their "low cost and economical operation" sales pitch of depression years; they needed something new to talk about. The natural here was "horsepower." The engineers had their engine performance sheets snatched from their hands, and the rest is history.

Horsepower in the front office increased faster than the engineers could keep up with it, and the race was, and still is, on. Horsepower has increased an appreciable amount, so it seems reasonable to assume that the pitch will be with us for some time. Is this increase really dangerous, or is high horsepower just an innocent victim of associated publicity? Thru association plus this same publicity, the thought is created in people's minds that high horsepower and high speed are one and the same

thing, and that therefore high horsepower is causing accidents. Admittedly, excessive speeds do cause or contribute to most accidents, but published statistics neglect to indicate that "excessive speed" is anything over a posted limit. When fatal accidents occur at speeds *not* in excess of 45 miles per hour *but* in a 20 to 30 mph zone, that's speeding, of course. But it can't be blamed on high horsepower. The statistics on this type of accident will show "excessive speed," and indirectly, through association, high horsepower has one strike against it. Most cars of 15 years ago could also exceed any posted speed limit. Why, then, should higher horsepower suddenly be the big bad wolf? Publicity! Strike 2!

Many highway accidents occur while passing another car. Each time a 30-mph daydreamer must be passed, exposure to accidents increases. Here, then, is where "performance," as Detroit engineers interpret it, will pay off. Higher horsepower can, and has, increased the performance factor of your car, allowing you to get around highway hazards more quickly, without necessarily increasing top speed.

To understand this, it is necessary (Continued on page 74)



THE CONTINENTAL MARK II

photos by joe farkas



THE STORY BEHIND...

a modern classic



by don macdonald

Walt Woron and Don MacDonald compare notes on old and new. Mark II's grille is simpler, but tends to lose its identity and sharp detailing when viewed from a distance

PERHAPS A CLOSE LOOK at the original Lincoln Continental would lead you to guess that a car, to be a Continental, would have a long hood, a comparatively short passenger compartment, a short rear deck, and possibly a spare

tire on the outside . . ." So said Ben D. Mills (Assistant General Manager of the newly formed Continental Division of the Ford Motor Co.) on March 8, 1955, to an S.A.E. group in East Lansing, Mich. This officially planted teaser was one of many

that pegged the concept of the new Continental long before its actual introduction. By last summer it had been talked about so much that it was possible to (and many did) draw fairly accurate pictures of the car without ever having seen it. Overall, we would say that the buildup accomplished its purpose; namely, to convince a select few with the wherewithal that a modern classic could shortly be theirs.

For reasons that will become apparent, it is unfair to describe the conception and birth of the Mark II without briefly reviewing the history of the previous car that in retrospect must be designated Mark I. The late Edsel Ford, President without power of the Ford Motor Co. from 1919 to 1943, was a connoisseur of fine automobiles. He personally designed many, but his best was based on the 1939 Lincoln-Zephyr, which he named the Continental. At first there was no thought of production. It was to be his personal car, with possibly a couple of duplicates for his driving-age sons, Henry II and Benson. But everywhere he went, public reaction was so immediately favorable that production became mandatory.

Continental's started coming off the line in October, 1939, and with time out for



OUR FIRST DRIVE
by walt woron

EVER WATCH a Rolls-Royce roll silently down the street and wonder what it would be like to drive that exquisitely finished piece of machinery? Or drool with envy over a Bugatti 57-S you saw tucked away under a blanket in someone's garage? Or stand back and longingly admire the graceful contours of the "Queen of the Classics," the Lincoln Continental? If you have, don't think that you're alone. Most car bugs (and that includes me) are right with you.

Maybe you're different. Maybe none of these desires have ever hit you. But, I'll irrevocably state that you're bound to admire something about the newborn Continental, be it looks, detail

finish, performance, the fact that it's different, or that the Ford Motor Co. had the gumption to revive this marque.

If you're loaded with the dough (around \$10,000) you can plunk it down and drive out in a new Continental, which will make you one of a select group of perhaps 1500 the 1st year. When you do, you'll be the envy of countless thousands more who'll never even get to sit in a Continental, much less drive one. For what it might be like, take a ride with me on the short test track at the Continental Division in Detroit (where every car is tested before being turned over to the customer). Just for kicks, let's imagine that you're a customer and are going to the Lincoln showroom to drive out in your new car.

The first thing that you notice as you approach your Continental is that it's so well finished — even surprisingly so. You were ready to find fault with it, looking for file marks, rough edges, bad spots in the paint, poor chrome—but there's nothing of that sort here. As you walk up to the driver's door, you grip the doorhandle, push in the button with your thumb, and the door opens easily. (You can't help nostalgically noting, tho, that it doesn't have the no-handle doors of most models of the original Continental.)

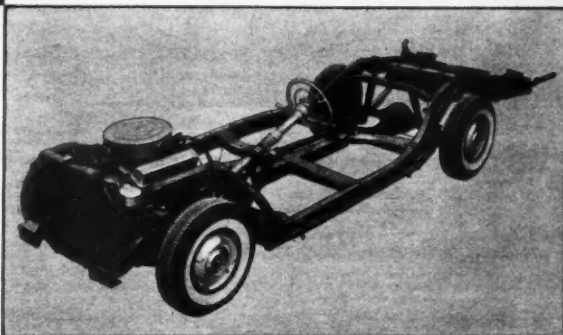
As you snoop slightly to get in, you find it just a bit difficult, mostly because of the step-down design, the wrap-around windshield, and the lowness of the car. You find that the front seat wasn't all the way back as you like it, so you touch the power seat control (located with a group in the door armrest that includes buttons for the windows and even the windwings!). The seat glides back. You've pulled the door closed, finding that the inset in the long armrest is positioned right for a finger-grip. The crank-type doorhandle intrigues you, so you pull back on it to see how easily the door opens. You pull the door to again, and satisfiedly note that it closes with a solid "whump."

You find that the instrument panel is tastefully done with 4 dials in a row, each of them shrouded at the top to prevent light glare on the windshield. The left one includes a cluster of



'48 Continental on right was used by company as reference car while new one was being developed. Mark II captures flavor of original without copying any detail. Post-1948 developments like integral exhausts give less cluttered rear

"Cow-belly" frame of extreme rigidity and dual exhaust system routed along outside of rails allowed body engineer Buehrig to obtain chair-height seating in an unusually low (56 inches overall) car. Engine is a dressed-up Lincoln. Note center bearing of Hotchkiss drive and extra-husky rear shocks



the war years, a total of 5322 were built, production ending in 1948. Well over half of this number are still in existence, in many instances lovingly cared for by their original owners. Regardless of vintage, it was a car of great character. MT (July 1952) described it as "a Classic, the last one produced in America. It had beauty — but more than that, it had personality." Popular opinion agreed.

Such was the legacy inherited by the car you see on these pages. It was obvious that no "Mark II" could be successfully marketed that did not combine the best of the old in modern formal dress. This stringent requirement precluded a 1949

fuel gauge, water temp, oil pressure, and ammeter. Next to that is the speedometer, the clock with sweep-second hand, and a tachometer. Having white numerals and letters on a dark gray background, they are easy to read. The padded dash should eliminate glare from that quarter.

Looking around for the other controls, you see the heat and vent knobs (of the aircraft-lever variety) in a panel below the radio speaker and above the transmission hump. They're easy to reach, but a bit difficult to read. In a matter of time, tho, you're certain they'll become familiar.

You place your key in the ignition lock, turn it and the engine quietly springs to life. You place the shift quadrant of the Turbo-Drive automatic transmission in DRIVE range, reach forward under the dash with your left hand, grip and twist the pistol-type handbrake to release it. With the sole of your shoe resting on the large throttle and the side resting comfortably against the thick carpeting covering the transmission hump, you move forward slowly. You touch the wide brake pedal (supported with only one pendulum arm, unlike the 2 of the '56 Lincoln) and feel instant braking response. You then rest your left foot to the side of the pedal, where there's room enough for both of them.

It's with considerable pleasure that you get the feeling of being a part of the car, for even tho the hood is long (which could give you a detached feeling) you're close to the windshield. Vision forward in a 180-degree arc is exceptionally good because of the combination of the wrap-around windshield and the extremely narrow (1 1/2-inch) post. You can see the ground just a few feet in front of the bumper, even with the seat in its full down position and despite the expanse of metal up front.

Once you're out on the street, you're amazed at the quietness with which your Continental rolls along. (While Don MacDonald and I cruised around the Continental test track for comparison shots of the new car with the '48 Lincoln Continental,

I could not hear the V8 but could plainly hear the V-12.) Even when you really tromp down on the throttle and surge forward, you don't hear a mechanical clattering. You note with satisfaction that acceleration is plenty good from a stoplight or on the highway (around 11 or 12 seconds from 0 to 60 mph, for instance).

As you take your first few corners you feel confident that if need be you could drive this car hard. (I talked to a Ford employee who had driven one of the engineering prototypes from Michigan to Arizona. He's not the kind who sings undue praise about his own products, yet he bragged about the car's over-the-road feel and handling. "It cruised along silently and effortlessly, with nothing on the road giving us trouble, whether we were in the mountains or on open stretches," he claimed. I personally feel that it would out-handle a Lincoln, which is certainly no slouch in corners.)

The 16-inch steering wheel sits in your lap, and the seat-to-wheel relationship is such that it can be changed to suit your own tastes (by raising or lowering the seat, or by moving it back and forth). The sort-of bolster effect across the top and sides of the seats and the high transmission tunnel serve to keep you confined to your seat with little sidewise movement.

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As you turn into your driveway, you're amply satisfied that you've made a wise 5-figure (or thereabouts) investment. It gives you quite a sense of pride. One thing you're sure of — besides being a good performing car, it won't go out of style for quite a few years. Why should it change?

THE STORY BEHIND...



a modern classic



by don macdonald

Walt Woron and Don MacDonald compare notes on old and new. Mark II's grille is simpler, but tends to lose its identity and sharp detailing when viewed from a distance

PERHAPS A CLOSE LOOK at the original Lincoln Continental would lead you to guess that a car, to be a Continental, would have a long hood, a comparatively short passenger compartment, a short rear deck, and possibly a spare

tire on the outside . . ." So said Ben D. Mills (Assistant General Manager of the newly formed Continental Division of the Ford Motor Co.) on March 8, 1955, to an S.A.E. group in East Lansing, Mich. This officially planted teaser was one of many

that pegged the concept of the new Continental long before its actual introduction. By last summer it had been talked about so much that it was possible to (and many did) draw fairly accurate pictures of the car without ever having seen it. Overall, we would say that the buildup accomplished its purpose; namely, to convince a select few with the wherewithal that a modern classic could shortly be theirs.

For reasons that will become apparent, it is unfair to describe the conception and birth of the Mark II without briefly reviewing the history of the previous car that in retrospect must be designated Mark I. The late Edsel Ford, President without power of the Ford Motor Co. from 1919 to 1943, was a connoisseur of fine automobiles. He personally designed many, but his best was based on the 1939 Lincoln-Zephyr, which he named the Continental. At first there was no thought of production. It was to be his personal car, with possibly a couple of duplicates for his driving-age sons, Henry II and Benson. But everywhere he went, public reaction was so immediately favorable that production became mandatory.

Continental started coming off the line in October, 1939, and with time out for



OUR FIRST DRIVE

by walt woron

EVER WATCH a Rolls-Royce roll silently down the street and wonder what it would be like to drive that exquisitely finished piece of machinery? Or drool with envy over a Bugatti 57-S you saw tucked away under a blanket in someone's garage? Or stand back and longingly admire the graceful contours of the "Queen of the Classics," the Lincoln Continental? If you have, don't think that you're alone. Most car bugs (and that includes me) are right with you.

Maybe you're different. Maybe none of these desires have ever hit you. But, I'll irrevocably state that you're bound to admire something about the newborn Continental, be it looks, detail

finish, performance, the fact that it's different, or that the Ford Motor Co. had the gumption to revive this marque.

If you're loaded with the dough (around \$10,000) you can plunk it down and drive out in a new Continental, which will make you one of a select group of perhaps 1500 the 1st year. When you do, you'll be the envy of countless thousands more who'll never even get to sit in a Continental, much less drive one. For what it might be like, take a ride with me on the short test track at the Continental Division in Detroit (where every car is tested before being turned over to the customer). Just for kicks, let's imagine that you're a customer and are going to the Lincoln showroom to drive out in your new car.

The first thing that you notice as you approach your Continental is that it's so well finished — even surprisingly so. You were ready to find fault with it, looking for file marks, rough edges, bad spots in the paint, poor chrome—but there's nothing of that sort here. As you walk up to the driver's door, you grip the doorhandle, push in the button with your thumb, and the door opens easily. (You can't help nostalgically noting, tho, that it doesn't have the no-handle doors of most models of the original Continental.)

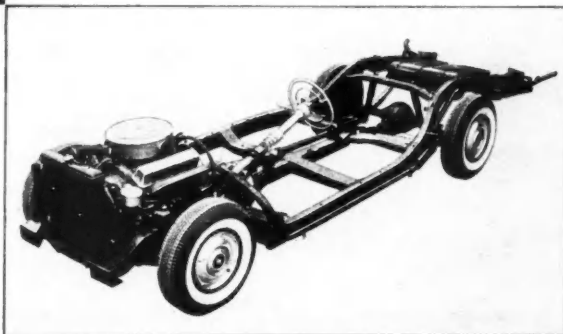
As you stoop slightly to get in, you find it just a bit difficult, mostly because of the step-down design, the wrap-around windshield, and the lowness of the car. You find that the front seat wasn't all the way back as you like it, so you touch the power seat control (located with a group in the door armrest that includes buttons for the windows and even the windwings!). The seat glides back. You've pulled the door closed, finding that the inset in the long armrest is positioned right for a finger-grip. The crank-type doorhandle intrigues you, so you pull back on it to see how easily the door opens. You pull the door to again, and satisfiedly note that it closes with a solid "whump."

You find that the instrument panel is tastefully done with 4 dials in a row, each of them shrouded at the top to prevent light glare on the windshield. The left one includes a cluster of



'48 Continental on right was used by company as reference car while new one was being developed. Mark II captures flavor of original without copying any detail. Post-1948 developments like integral exhausts give less cluttered rear

"Cow-belly" frame of extreme rigidity and dual exhaust system routed along outside of rails allowed body engineer Buehrig to obtain chair-height seating in an unusually low (56 inches overall) car. Engine is a dressed-up Lincoln. Note center bearing of Hotchkiss drive and extra-husky rear shocks



fuel gauge, water temp, oil pressure, and ammeter. Next to that is the speedometer, the clock with sweep-second hand, and a tachometer. Having white numerals and letters on a dark gray background, they are easy to read. The padded dash should eliminate glare from that quarter.

Looking around for the other controls, you see the heat and vent knobs (of the aircraft-lever variety) in a panel below the radio speaker and above the transmission hump. They're easy to reach, but a bit difficult to read. In a matter of time, tho, you're certain they'll become familiar.

You place your key in the ignition lock, turn it and the engine quietly springs to life. You place the shift quadrant of the Turbo-Drive automatic transmission in DRIVE range, reach forward under the dash with your left hand, grip and twist the pistol-type handbrake to release it. With the sole of your shoe resting on the large throttle and the side resting comfortably against the thick carpeting covering the transmission hump, you move forward slowly. You touch the wide brake pedal (supported with only one pendulum arm, unlike the 2 of the '56 Lincoln) and feel instant braking response. You then rest your left foot to the side of the pedal, where there's room enough for both of them.

It's with considerable pleasure that you get the feeling of being a part of the car, for even tho the hood is long (which could give you a detached feeling) you're close to the windshield. Vision forward in a 180-degree arc is exceptionally good because of the combination of the wrap-around windshield and the extremely narrow (1½-inch) post. You can see the ground just a few feet in front of the bumper, even with the seat in its full down position and despite the expanse of metal up front.

Once you're out on the street, you're amazed at the quietness with which your Continental rolls along. (While Don MacDonald and I cruised around the Continental test track for comparison shots of the new car with the '48 Lincoln Continental,

the war years, a total of 5322 were built, production ending in 1948. Well over half of this number are still in existence, in many instances lovingly cared for by their original owners. Regardless of vintage, it was a car of great character. MT (July 1952) described it as "a Classic, the last one produced in America. It had beauty — but more than that, it had personality." Popular opinion agreed.

Such was the legacy inherited by the car you see on these pages. It was obvious that no "Mark II" could be successfully marketed that did not combine the best of the old in modern formal dress. This stringent requirement precluded a 1949

I could not hear the V8 but could plainly hear the V-12.) Even when you really tromp down on the throttle and surge forward, you don't hear a mechanical clattering. You note with satisfaction that acceleration is plenty good from a stoplight or on the highway (around 11 or 12 seconds from 0 to 60 mph, for instance).

As you take your first few corners you feel confident that if need be you could drive this car hard. (I talked to a Ford employee who had driven one of the engineering prototypes from Michigan to Arizona. He's not the kind who sings undue praise about his own products, yet he bragged about the car's over-the-road feel and handling. "It cruised along silently and effortlessly, with nothing on the road giving us trouble, whether we were in the mountains or on open stretches," he claimed. I personally feel that it would out-handle a Lincoln, which is certainly no slouch in corners.)

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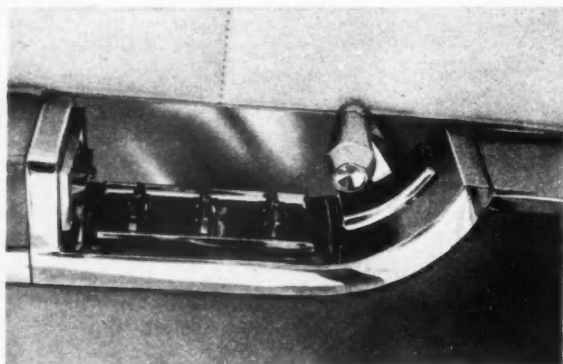
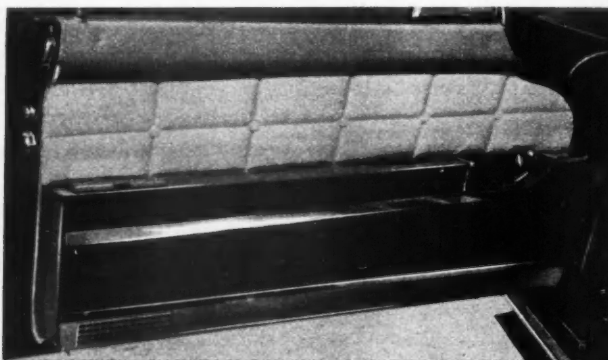
a modern classic

Continental patterned around the bulbous Lincoln-Mercury body styles of that year. One was built, but management did not consider it worthy of the name.

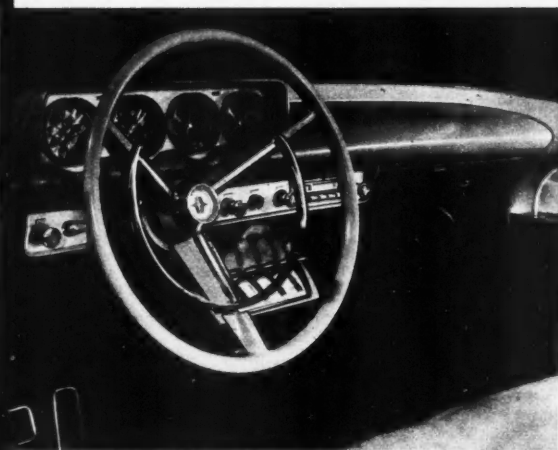
By the time the next tooling change came in 1952, the project was more than just an on-again, off-again dream. Youngest Ford brother Bill (then 26) had obtained management approval to create an entirely new Continental, timed for late 1955 production.

Altho dynamic and aggressive as any man, William Clay Ford was the ideal choice to head a unit of the Ford Motor Co. dedicated to perpetuating the ideal of Edsel Ford. Like his father, Bill seems much more interested in recreating a fine

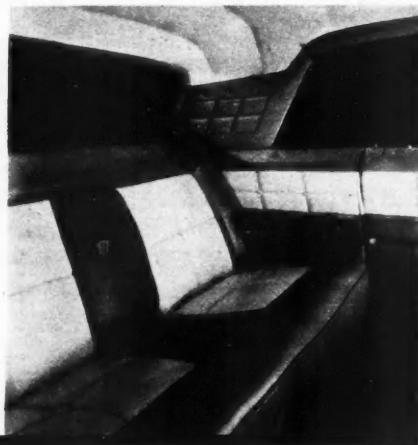
Separate heaters supply ducts along bottom of each door. Lock faces of door and B post are liberally chrome plated



View of door and window controls shows painstaking finish. Front seat and all windows including vents are power operated



Tiffany-quality instruments are easily readable. 5000-rpm tach is on right. Pedestal quadrant holds various heat and vent controls. Package drawer on far right drops down to open, but flanges prevent spilling of contents. Safety-type wheel is well-advised last-minute addition

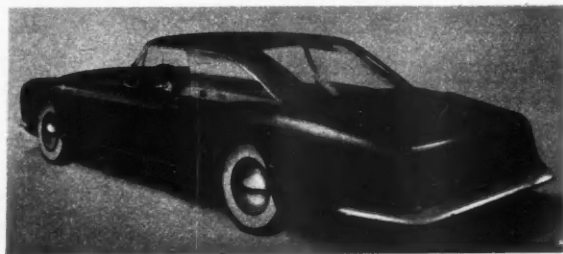
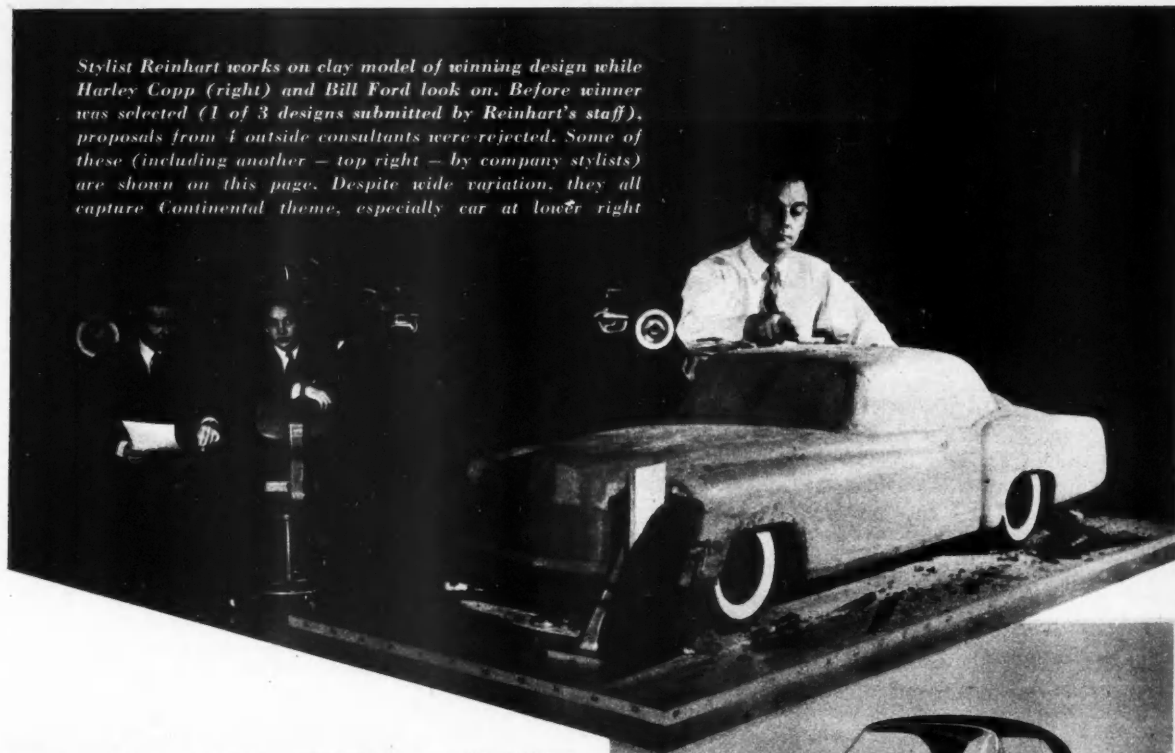


Interior options include contrasting colors of leather (imported from Scotland because there is no barbed wire there to mar the hide), fabric, or the 2 combined. Rear-seat passengers have more legroom than in average sedan. Seat trim and center armrest are for 4 passengers' absolute maximum comfort

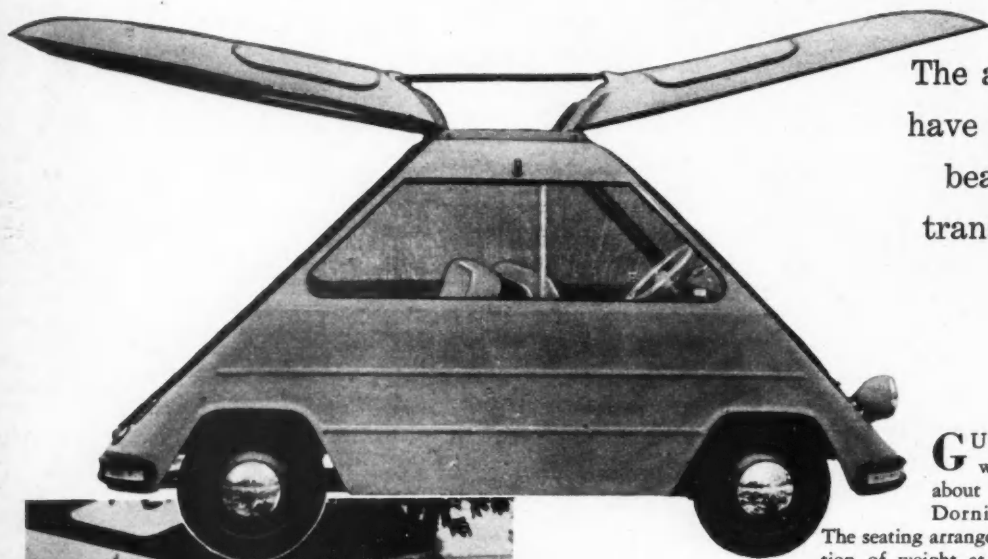
automobile than in the mass-production of transportation. Unlike his father, he is encouraged in this endeavor by a family management that has buried the Model T and all it stood for.

Special Product Operations, as the Continental Division was called then, spent 1952 in a seemingly endless round of product planning. What the group lacked in size was more than made up in quality. Besides Bill (Continued on page 64)

Stylist Reinhart works on clay model of winning design while Harley Copp (right) and Bill Ford look on. Before winner was selected (1 of 3 designs submitted by Reinhart's staff), proposals from 4 outside consultants were rejected. Some of these (including another — top right — by company stylists) are shown on this page. Despite wide variation, they all capture Continental theme, especially car at lower right



NEW FROM THE OLD COUNTRY



The autumn shows have produced off-beat novelties in transmissions and powerplants

GUNTHER MOLTER writes from Germany about this odd dos-a-dos, the Dornier-Delta Rolleromobil.

The seating arrangement means concentration of weight at the center of gravity, more usable room, and safety for the rear passengers in accidents. You can take out the back seat for luggage, or make the whole thing up as a double bed. Huddled in the middle between the seats is a 2-stroke, aircooled, oversquare "2," which drives the rear wheels thru a 3-forward-speed gearbox and swing axles. Coil springs and hydraulic shocks control both ends. Top speed is a calm 40 miles per hour, with 45 miles per gallon. Price is to be around \$700 in Germany, but production won't start til mid-'56.

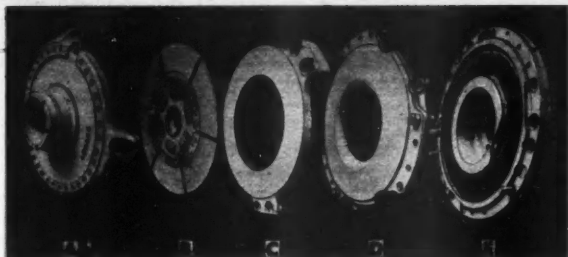


GUNTHER MOLTER

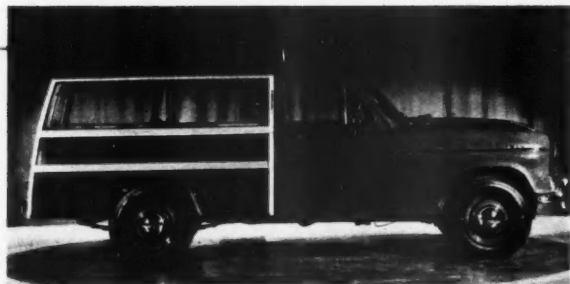


GORDON WILKINS

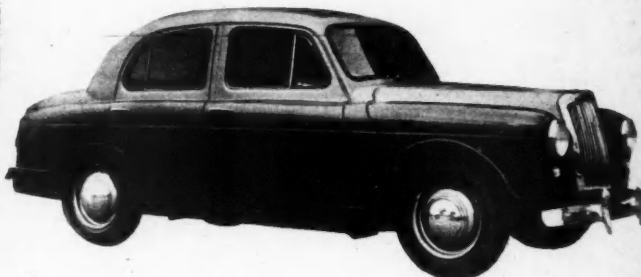




GORDON WILKINS



PAUL WEST



BELOW, OPPOSITE: That classic radiator belongs to the '56 Armstrong-Siddeley Sapphire, and it conceals the world's 1st driver-regulated power steering (soon to be followed, rumor has it, by a like setup on the 1st new Citroen in 22 years). The dashboard lever shown lets you steer with full, part, or no power boost.

ABOVE: Here's an exploded view of the new electromagnetic clutch available on the '56 baby Renault. Flywheel E has magnet windings recessed in its face. When they are energized they draw armature D toward the flywheel. Clutch plate B, with friction elements of sintered bronze, is gripped between pressure plate C (bolted to flywheel E) and pressure plate A (bolted to armature D). A microswitch cuts off the current when the driver's hand

touches the gearshift lever, or when the engine drops to idling speed; it acts as a hillholder when the throttle is slightly open and a gear engaged.

Next is Morris' new Isis station wagon, an 86-horsepower overhead-valve 6 to carry 6 or 8 passengers. Competently sprung with torsion bars, it will not be imported to the U.S. at present.

The Lanchester Sprite, baby of the Daimler family, should be 1st of them to appear with the Hobbs epicyclic gearbox, a 4-speed automatic controlled by a series of hydraulically loaded brakes and clutches, and already well tested on busses. Correspondent Paul West, at the suggestion of Hobbs, slipped it into reverse at 50 mph for a jerkless, super-fast stop. The makers assured him that this does no harm.

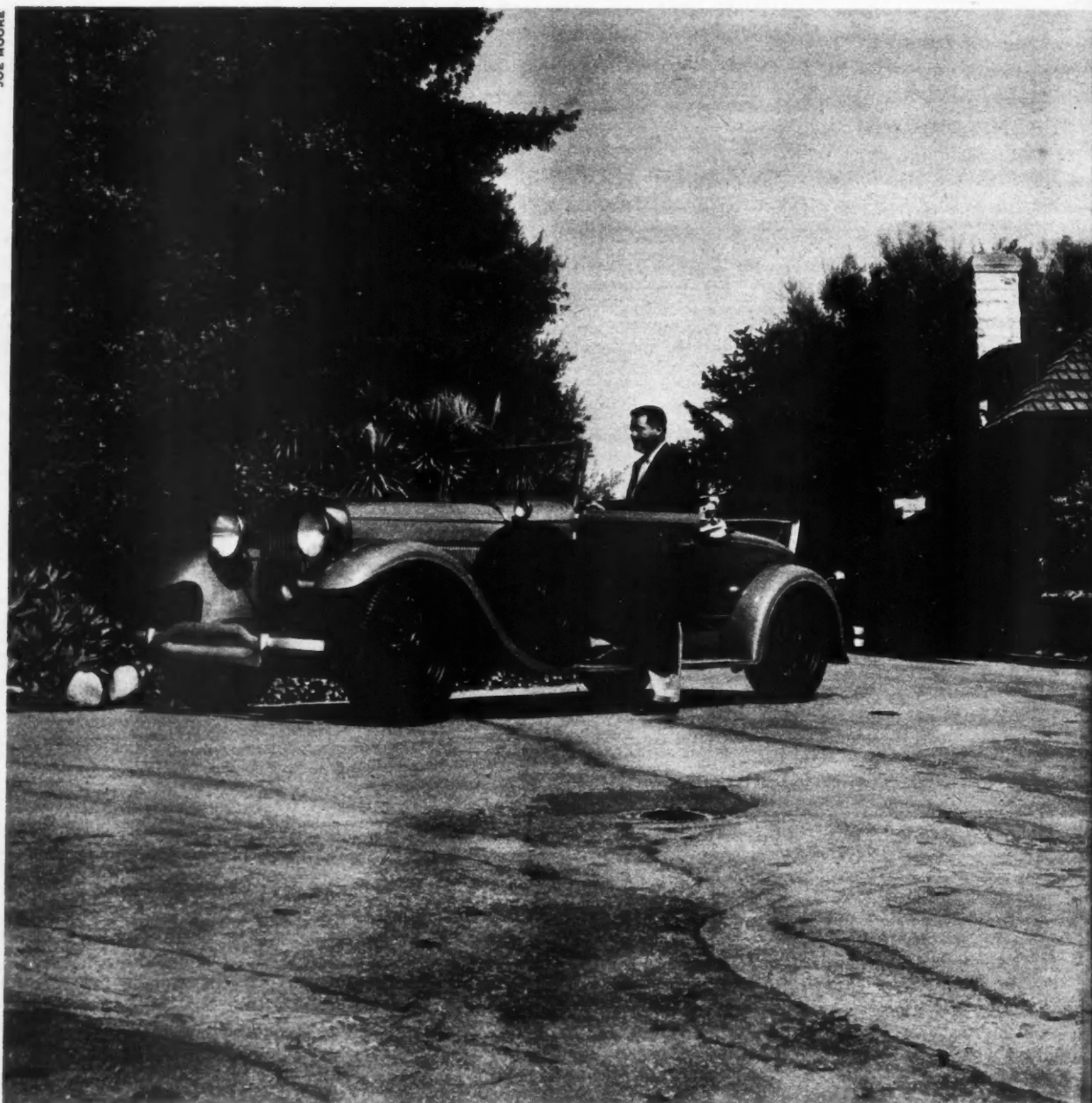
BELOW: The control panel of Austin's semi-secret gas turbine car would seem to belie the promise of greater simplicity, but this is, of course, a test model. A tachometer reading to 25,000 rpm and various thermometers (2 of them go up to 1000°C and indicate turbine inlet temperatures) help to fill the dash. A small wheel controls fuel cutoff and a steering column lever controls idling. The short floor lever has only forward and reverse positions, and there is no need for a clutch. There are no immediate plans for production, but we'll keep you posted.

And a new 12 could be in the offing, judging from David Brown's personal Lagonda sedan. Its grille looks too much like the 12-cylinder Le Mans Lagonda for mere coincidence.



GORDON WILKINS





Bob Gottlieb with the prize, a 6-wire-wheeled Lincoln convertible cabriolet with custom aluminum body by LeBaron

Clarity Wins a Classic

It was a tough job picking the winner in our July Classic Car Contest. A demonstration of clear thinking topped all entries

WELL, the MOTOR TREND Classic Car Definition Contest is over, and here is the winning definition as well as the runner-up. Congratulations are in order to Lewis C. Markley, of Ardmore, Okla. Feast your eyes on his prize, the Lincoln LeBaron convertible pictured on the opposite page. The car was donated by MOTOR TREND and Lynn Mayfield of La Jolla, Calif. While it requires much restoration, it will indeed be a jewel of a classic when completed.

The car was picked after much consideration and over many others that were driven and tested. It is in need of paint, plating, front-seat upholstery (the rumble is nearly perfect), a top, and minor incidentals. Mechanically, it is in good condition, and except for minor adjustments can probably be driven during the time it is being restored. It steers well, brakes well, and has the familiar Lincoln feeling of solidarity. Even in unrestored condition it commanded much attention and many admiring glances and comments.

The contest gave us a great deal of knowledge concerning the attitude of our readers toward classic cars. Each and every entry was read and considered, and from each batch of 1000 entries, approximately 40 were set aside and considered as possible winners. The choice entries were read and re-read until the winners were selected.

The contest definitely established the 1932 SJ Duesenberg as the most popular classic car in the world. More than 68 per cent of the entrants chose the Big D as their favorite car. Surprisingly, the Bugatti placed 2nd as the most popular classic, *even tho most contestants choosing Ettore's masterpiece qualified their selections with statements that they had never even seen a Bugatti!* Other popular marques were Cadillac,

Mercedes, Packard and Chrysler, and a very strong showing was made by Hispano-Suiza. We were somewhat mystified by the small number of entrants picking Cord and Marmon as the greatest classics. Possibly owners of these cars were too busy working on them to enter the contest.

The laborious task of reading each entry was somewhat lessened by humor wittingly and unwittingly injected in some answers. Bob Yelton of Ft. Worth, Tex., commenced his letter as follows: "Your Classic Car Editor, Bob Gottlieb, in his book on classic cars, has defined the classic car clearly and concisely. So, employee or not, just give him the car. Me, I need another car like a hole in the head!"

Another entrant in describing the characteristics of a classic stated most colorfully: "You could feel every bump and jar right up your tonneau."

After deadline (which we closely adhered to) a card was received from Pittsburgh, Pa.: "Please don't read my entry in your contest. I have already sent in my letter, but as my wife won't let me keep the car, I would like you to omit reading it. If you do read it, I made a mistake because my favorite model was a 1923, not a 1926."

Finally, a few entrants copied the Gottlieb definition word for word, and in picking the Chrysler LeBaron phaeton as favorite car, copied word for word from the section on the Chrysler LeBaron in the Trend Book, *Classic Cars and Antiques*.

Some favorable definitions were very short while others were so long that they had to be discarded because they did not comply with the contest rules. Fred Benson, of Wheaton, Ill., sent in a very short definition which merits repetition. He wrote: "A classic car is a car manufactured as a 1925 model or later, with the distinction of having attributes beyond the average mass-produced automobile from the standpoint of either engineering or body styling, or both."

A summary of all the entries clearly established the following facts:

1. The great majority of readers chose beautiful appearance as the prime requisite for a classic.
2. Second in importance was the necessity for a long hood and graceful fenders.
3. Construction is of more importance to the average enthusiast than mechanical perfection or performance.
4. The great majority of owners and non-owners prefer an open or convertible car to a closed one.
5. About 95 per cent of the readers have common views on those cars that are classic and those cars that are non-classic.
6. The classic car is considered the most functional vehicle ever built; and
7. Classic car owners expressed a preference for classics for everyday use over modern cars.

(The foregoing information comes from the actual entries and the accompanying chatty letters generally enclosed.)

A few basic thoughts were found in numerous entries. They were:

1. A classic is a car that is in fashion and style year after year. It does not become obsolete in appearance or performance.
2. The classic is the finest expression of the art of automotive construction, and the true classic is the finest product of engineering ability.
3. The classic dominates its contemporary field in power, speed, endurance, and styling. For these reasons they have lived and will continue to live for many years.
4. All trim on a classic must serve a functional purpose in addition to being a pleasing unit of design. Those cars with trim serving no function other than appearance are not favored. (A logical extension of this thought is certainly applicable to the dechromed contemporary custom cars.)
5. The inherent beauty in typical classic styling results from a body built around the wheels and the engine.

CONTINUED

CLASSIC CAR CONTEST ENTRY Submitted by Lewis C. Markley

It was the best. When a person speaks of a classic he may be referring to a painting, a piece of music or literature, or to an automobile. In any case he means one which was so outstanding, and so brilliantly and artistically done, that it forever retains its popular appeal. It was the best and it's still the best. That's a classic!

Three factors contribute to the appeal which makes a car a classic: quality, performance and beauty. A few have made the grade through outstanding performance and quality alone and at least one by appearance and quality. But high quality (outstanding workmanship and design with consequent high price tag) is essential! No car without it ever attained the title.

In constructing our definition we must remember that it's the perennial appeal which makes a car classic. We must keep in mind that the most important contributing factor is high quality. To be a classic a car must have outstanding performance or eye-appeal and usually has both. Our definition should therefore read as follows: Classic Car - A high quality automobile with such outstanding performance and/or appearance that it has retained or increased its popular appeal.

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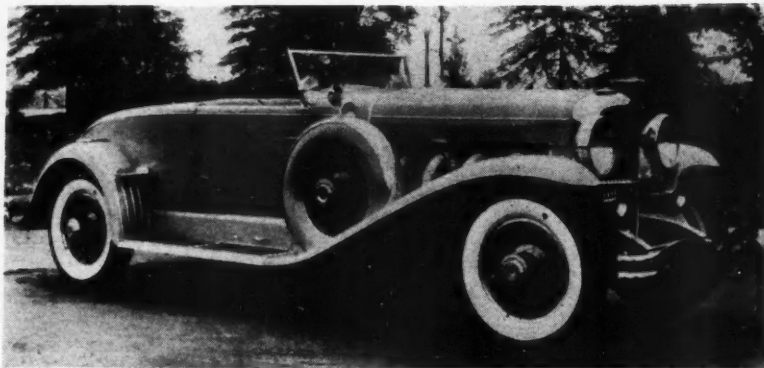
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6. In addition to spectacular coachwork, classics of note had some unique mechanical innovation, such as a great number of cylinders or valves, or unusual dual-ratio rear ends, or front-wheel drive.

Many readers went overboard in expressing the classic as a work of art in metal, or in comparing it to a Rembrandt or esthetic counterparts in other fields. It was pleasing to read an entry from K. R. Graham of Kansas City, Mo. Mr. Graham attacked the problem from a standpoint different from that used by most other readers. He placed well-founded mechan-

gine must not have an aluminum head, water pump, or cylinder block. Proper metals must be used for proper purposes. There is no cutting of quality to lessen the cost of the automobile. It will have 2 ignition systems, preferably one magneto operated. The magneto will be of genuine German Robert Bosch manufacture with a solid brass base. The body must be suited for the individual who loves to drive for sport, and not for the family man who must take 6 people with him. No single automobile has all perfect features."

The car coming closest to Mr. Graham's



By far the most popular classic among contest entrants was '32 Duesenberg Super J

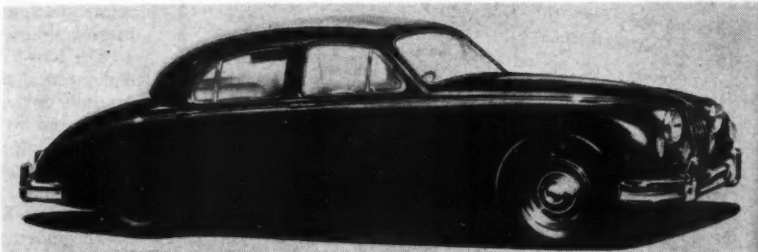
ical necessities far above any other considerations. An excerpt from his definition follows: "It will be costly, have an open body, and be fabricated with the best of materials, and with the best workmanship thruout. Mechanical engineering must be superb . . . making the machine a good performer and possibly a record holder. It should have as few weaknesses as possible. It should not be infamous for bearing, cooling or gear trouble. The machine must be sound and have proven itself so. It should be efficient enough to sit for 20 years, then start with a minimum of effort. It does not have to outrun everything on the road but it must be capable of sustaining a relatively high speed for long periods of time. The engine must be designed so that all parts are easily accessible. The en-

definition, in his estimation, is the Rolls-Royce Silver Ghost.

And speaking of the car coming closest to a definition, a few readers thought our contest was an attempt to find the finest classic car ever built. The request for the 2nd part of the entry (describing the entrant's favorite classic) was simply to ascertain the reader's view of that automobile most closely approaching the individual definition. It was never intended that the car chosen by the winner would be considered the greatest classic ever built.

To those of you who tried but were unsuccessful, many, many thanks. In general, a great deal of thought was expressed in the replies. They indicate a healthy attitude toward the classic car hobby. Congratulations once again to Lewis Markley.

Junior Jag



Too late for inclusion in our "New from the Old Country" (pages 40-41), Gordon Wilkins sent us this 1st photo of the new 2.4-liter (148-cubic-inch) Jaguar. All we know now is that it should boost sagging sales of British "saloons" in this country

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IT WAS ONE of those defenseless days when Tom sprang his newest car on me. He strode down the halls of maternity and through the louvered doors of my hospital room, with papers in hand and a grin on his face that could mean only *one* thing.

What is there about new babies that prompts men to buy cars? Maybe it's the absence of wifely restraint. At any rate, Tom was capitalizing on his week of freedom. There I lay, immobile, while he spouted his persuasive argument, documented with facts from current magazines and including a clincher about this "deal of deals."

I pictured the '29 Model A roadster weathering in our backyard. It too had been *the one*. On 2 energetic Saturdays Tom had stripped it of all workable parts; now it stood, a canvas-covered skeleton. It had outlived the pipedream, as usual, and here was *that* look again.

This deal was a 2nd-hand Volkswagen.

"Such a find!" he exclaimed, "... they rarely appear on lots."

"And how did this 'gem' happen to slip thru?" (I'm skeptical from grim experience.)

"Sold by a Navy man—bought it overseas. His wife didn't like it . . . that is . . . you know Memphians (this was to cover

"I married a car fiend!"

*was the author's woebegone cry
to our readers 2 years ago.*

Read what has befallen her now . . .

A FIEND GOES FOREIGN

by Jane R. Bade



the wife-doesn't-like part), too conservative to know a good find! This guy drove it all the way back from New York, only has 17,000 miles; it's a bear for punishment."

Please understand, I had some pretty shrewd arguments stored up by then, but I let them go. This was going to be *his* baby. I had 3-day-old Susan to think about.

In the past Tom had concentrated on a Continental, a midget racer, roadsters, Model As, and had taken one regrettable fling at a current model. So this foreign business was new to me. Only once had I glimpsed a Volkswagen—and this under protest. I'd stalled successfully until one day Tom caught me without an excuse for staying home. In no time I was whisked to a foreign car shop and introduced to a blunt-nosed, goggle-eyed beetle, which I had no intention of owning. "How stupid," I thought, with all the traveling we do—2 children, the dog, and endless paraphernalia. But now the crazy thing was ours.

I was initiated on my ride home from the hospital with baby Sue. Perhaps it was the sun-splashed autumn that sold me; maybe the soft bundle in my arms. Anyway, I fell in love with this machine from the start.

Tom showed me all the gimmicks: a tricky gas tank without

gauge, the speedometer (in kilometers), those signal wingdings, and the motor in the rear. Before long I mastered the transmission and could double clutch in the downshift (this sounded particularly masterful to me). I could understand torsion bar suspension, quote the gas mileage, and explain gear ratios. Really I was quite proud to drive the thing and trusted its clocklike innards implicitly.

My viewpoint was not shared. Mechanics scoffed, our parents raised their eyebrows; everywhere heads turned in our direction. Children pointed, giggled, and questioned their puzzled mothers. Dignified gentlemen in Cadillacs tried to race us. One man leaned out of his rundown Plymouth and scolded, "You ought to be ashamed to drive a car like that—a big boy like you!"

So while we drove a remarkably well-built car, safely sprung and in excellent condition—a car that cut gas bills in half, never changed body style, maneuvered thru traffic and parked anywhere—we were criticized for it.

However, this was not hopeless martyrdom. Daily, curious people, from the grocery boy to society matrons, debated Volkswagens with us, pro and con. One friend sold his Triumph for a VW; another is still trying to convince his wife. We took the

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blue varmint on 500-mile sprints, but the big test came on our winter vacation to Chicago. When about to set forth, we tackled the problem like a keychain puzzle. Out came the right front seat, and in its place went a baby's travel bed. Three suitcases and cardboard cartons squeezed in the baggage compartment and beneath seats. Bulging duffels lay under the hood. Diapers were crammed everywhere. Baby bottles in a 6-pack cola carton sat squarely inside the spare tire. Stanley, our travel-crazy dog, assumed her position by the heater knob, where occasionally escaped a whiff of fresh air. We even managed about 6 square inches for my feet.

So we took off, in a 4-cylindere blast, while neighbors shook their heads and grandparents waited breathlessly at the end of the line. The VW sped along with the evenness of an electric commuter train. Inside we were secure and warm. We busied ourselves computing mileage (multiply by 5 and divide by 8; it takes intelligence to drive one of these things).

When bottles needed warming, we transferred them from the "trunk" to the round heater vents, and family life went on. Baby Sue lay snug in her bed. Two-year-old Carol bounced gleefully in her car seat, exclaiming about the "big cars." Her perspective is slightly warped!

In farm towns we caused a major sensation on every Main Street.

"What's that there frisky thing?" a weathered man inquired. Gas station attendants overflowed the tank as they peeked and probed. One proud fellow refused to speak another word after poking the hose into the rear of the car. At service stations, restaurants, motels (even in driving rain), Tom not-so-patiently explained his little oddity, permitting examination of the engine. Had we charged admission the trip could easily have paid for itself.

In Chicago the temperature hit 14 below and the Volkswagen refused to move. Such a blow to the master's ego! All night long a lamp burned beside the carburetor, and still it would not budge without a push.

This difficulty and others brought me into the hallowed bowels of the foreign car shop. Here we found sympathetic ears and mechanical know-how—at a price.

There was a tense hush as 5 men huddled over one machine. Tools lay on a scarlet cloth on the fenders. They were handled gently, then carefully locked away. This was an emergency ward. Other "patients" were parked row on row. A stripped Italian sports car, a 2-tone Jag coupe, a 1928 Lincoln touring car, and a custom Spohn waited silently for the specialist. Their chrome engines, burnished leather seats and lean bodies spoke eloquently to me of the dreams and heartaches entombed therein.

Of course, there was time to look around. (It's part of the plan—this opportunity to browse and whet appetites.)

Tom probed the Microbus, extolling its merits. He adoringly rubbed the Porsche, and deliberated "objectively" about a VW sunroof sedan.

A blond mechanic approached. "Vut iss da matter wit her?" Tom's eyes lit up at the 1st accented words. This would be a job well done!

"Choke cable, I think." Tom lifted the hood. "She stalls and sometimes won't she won't start."

"Ve fix her fine."

"Choke cables run about a buck 50?" Tom inquired.

"Ya, but we need just a little gasket here, one there, and she be like new."

Two nickel gaskets and 3 hours' labor—that was the German economy, and no amount of talking would convince this man to discard the worn part for new. I shrugged my shoulders. Tom kept his \$1.50. The expert adjusted the old cable



"And you'll be sure to sterilize your tools, won't you, old man?"

free of charge and we went on our way, stalling at the next icy stop.

Back thru southern Illinois real trouble began. Dusk had settled, one headlight was out, and the rain came drizzling down. Once in a while a light glimmered from some distant farm. The VW moved slower and slower up each of the rolling hills. Behind me the pistons were pounding out a spasmodic rhythm. Up front Tom drove with that stern, uncomfortable look. Not only was his pride at stake this time, it was doubtful that his pride would roll another inch.

The next town, Pinckneyville, Ill., was by no means a mechanical mecca. At a dimly lit station a mechanic approached us with awe. Perhaps he thought the Martians had landed, for he'd never seen a foreign car close up, had never heard of Volkswagens, and nearly had apoplexy at the sight of the opposed 4 in the rear.

Need I say we went no farther that night? In the morning we switched directions and chanced a run to the nearest dealer, in St. Louis. Carol climbed over laps and dog, from front to back, and back to front, grinding chocolate cookies into the seat. Susan fidgeted and with gooey fingers smeared the window panes.

In East St. Louis we hunted a motorcycle shop "that sometimes had funny cars parked out front." It was closed. Someone suggested a lumber dealer who owned a foreign car. When we looked up his office, the first rays of hope shone thru. The Volkswagen shop, he told us, was across town. If we didn't make it, this dealer would gladly send his truck to tow us in.

Thru the congested city we sputtered, slower and slower. At last—there it was. Like a band of refugees we entered the place. Out came the engine, and then the verdict: due to a poorly tightened manifold, one valve had burned out. They would tear down the engine, grind all valves and replace a rusted muffler. This would take most of the day.

The shop owner (in cap and tweed jacket) sauntered over casually to offer us his unheated showroom for our stay. There among the aristocratic vehicles we cajoled, entertained, and wrestled with the children 'til they would be entertained no more. The coke and candy machines lost their appeal. Formula and dry diapers were running out. Besides, 2 leather chairs and a washroom proved quite inadequate for feedings and naps, so I took the only alternative. Back to the "bug" and up on the grease rack we went, into the stifling upper atmosphere of the shop.

Down below the men worked meticulously, dipping and cleaning, screwing and unscrewing. Momentarily they referred to the service manual, which rested in a safe, clean space as tho it were the Gutenberg Bible. Water sprayed around us; the air hose screeched. We shuttled bottles and babies up and down. Stanley muffled a growl of distrust, and my body ached in the cramped quarters.

When darkness closed in, mechanics' wives arrived, and the shop door was locked. We looked down on an impatient audience. The engine was still out, and waiting seemed unbearable. At 8 P.M. the hood slammed shut, and we paid a fat \$70 bill. Free again and ready to push for home, we rolled out into a brilliant but paralyzed St. Louis, under a glaze of sleet. We crawled to the city limits, slid down a banked drive to the door of a motel room. Never had privacy and rest and quiet seemed so sweet.

Perhaps you would have given up after all this. I might have too, but not Tom. The Kraut in him was not easily daunted, especially when our dealer displayed an enticing new Volkswagen. It had synchromesh transmission (just for me), red leather upholstery, self-adjusting seats (on ours, I got out and unscrewed the bolts) and chrome.

It didn't matter that notes on the blue beetle remained. In the interest of "good business judgment" and "safety" we would trade this car, "the one we would keep forever," for a shiny tan model.

So now, having never owned one car more than half a year, we are on the 4th

month of this new VW—and still as proud as can be. Furthermore, this foreign mechanism is stealing its way into our hearts. We've gone across country, up mountains, thru snow and dust storms; except in an Oklahoma headwind the car performs without fault. Tom vacuums, washes, and polishes it until it gleams. He keeps doors and windows closed to preserve that new smell. He parks it in the shade, avoiding "limey" trees (whatever those are) as directed in the manual. He pores over lists of accessories (there are many) and studies the history and manufacture of Volkswagens in myriad publications which I'd hoped didn't exist—but do!

Without doubt this car is doing strange things to my husband's ego. Before, stop-light racers, dubious spectators, and insulting remarks were routinely ignored. Now a simple glance is a personal insult to Tom, our car, and, of course, to the German *volk* as well.

I hate to admit this, but even I have endangered its European dignity now and then. The time I drove up a mountain road with the emergency on, it hurt me as much as it did those rugged brakes. Then one day I turned against traffic on a one-way boulevard. Thoroughly embarrassed, I was dodging traffic and bewildered looks when I encountered a squad car face to face. In that flustered moment I smiled weakly, waved at the officers and disappeared *with haste* at the next crossing. I presume my stupidity was attributed to womankind and not foreign cars, but each squad car I pass makes me squeamish inside. You see, in our Volkswagen we are always marked men.

All in all, we are still an oddity in this mobilized generation of Americans, but we rather like it. Those jokes about roller skates, toys in your Christmas stockings, and squirrels under the hood are all old stuff to us. Children still point, Cadillacs race, many condemn, but we think pioneering is fun! We just smile knowingly and drive economically on our way.

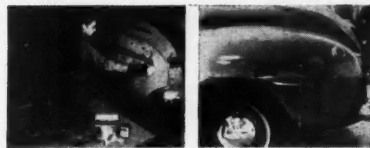
You've heard of conversation pieces, I'm sure. Some folks hang them on their walls, some set them on tables, but we drive ours. It's Tom's 17th car—the one, by the way, which "we are going to keep forever." I have my doubts about that, but for now (at least 'til the next "deal" comes along) my husband has gone strictly foreign.

The crazy part is this: for the 1st time in these fiendish adventures, this foreign bug has made me a fiend, too.

—Jane R. Bade

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photos by Joe Moore



AUSTIN A-50

England. But I'll let Pete tell it to you:

It's a little hard for Americans to understand how a car like the new Austin A-50 can produce serious excitement in England (and it does). Don't misunderstand: there's nothing wrong with the car. But it is so much the antithesis of '55 and '56 Detroit products that it's almost like meeting a musical-comedy Englishman, complete with traditional likes and dislikes, in the flesh.

To begin with, as you can see on these pages, the A-50 is retiring in appearance. The "What is it?" that we've grown to expect during our testing of foreign products was heard only once or twice. Britons' horror of conspicuousness must have heavily influenced Austin designers.

The deluxe model A-50 in no sense represents an austerity car in what is called its "home market." There are 4 cheaper

Austin sedans available in Great Britain.

What does the A-50 offer a U.S. driver that he either can't get in any domestic product, or can't get anywhere near the A-50's price (\$1895 at ports of entry)? Fuel economy is of course up near the top; this year you won't pay much premium for it in the form of lagging acceleration. Of course, the spotlight heroes didn't think of us as a threat, so we may have been taking an unfair advantage. You also get fine support from individual front seats, the right one being separately adjustable for your passenger's comfort; full leather upholstery front and rear; an enormous open parcel shelf below the dash (as well as a locking glove compartment); tire changing as civilized as any we expect to see until Detroit does something to eliminate it completely (see the photos on the opposite page); vent wings in the rear doors, a feature that has quietly vanished from a large number of our cars; sturdy, childproof double locks on these same doors; a locking gas cap; and soft but long-wearing carpets front and rear. The car is standard equipped with a good fresh-air heater fed by the hood airscoop.

On the debit side is a transmission whose 3rd and 4th gears shift so well but whose 1st, 2nd and reverse so impossibly that it makes one think that it was designed by 2 teams having no knowledge of one an-

other; and a decklid reluctant to stay open, matched by a hood reluctant to close.

What's it like to drive, especially after stepping out of a big car? You notice that getting in, even over the step-down door-sills, poses no problem. Austin has squeezed approximately the last inch of available room from a car of this size. There's plenty of room in front. The hooded instruments are right up below the wheel, and the ammeter and oil pressure gauge have vanished in favor of lights, the trip indicator is still there. The little engine starts up instantaneously. A hydraulically boosted clutch and low-geared 2nd make it pointless to use 1st except in starting on hills (we've given times with both methods for those who want to have their economy and eat it too). Cowl-mounted clutch and brake pedals are a concession to progress; the small non-treadle throttle, to hallowed tradition.

We took the A-50 over a rough desert-and-mountain 1000 miles before making our acceleration checks, tho overall "driving around" mileage—24.9 miles per gallon—includes everything from the time we got the car with 27 miles on the clock.

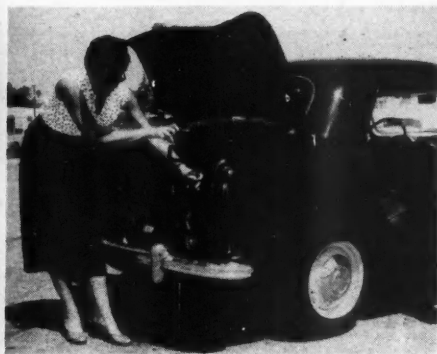
Test Condition	1st-Gear Start	2nd-Gear Start
0-60	28.3 sec.	31.9 sec.
0-30	7.2	7.6
30-50	10.6 (3rd, 4th)	
50-63	21.7 (4th only)	

A slight tendency to heat up when the car was very new was not borne out later, during the celebrated Los Angeles heat wave (110° F) of early September.

Ride is a little choppy because of the



Hardly a frequent concours winner for 1956, Austin features lines for convenience and comfort rather than esthetic delight. Body's and trunk's bulges pay off in useful space, sloping "bonnet" in visibility



"Starting handle," part of toolkit in every well-equipped British car, winds spare down to ground from hiding place



Then it raises or lowers the Austin with this sizable jack, which fits into covered slot concealed beneath front door



Suspended pedals, plenty of foot room make car suitable for all drivers. Packages aplenty can go on under-dash shelf

short wheelbase (just under 100 inches), but it's by no means harsh. You do feel all highway seams, but dips can be great sport with the well-tied-down suspension (conventional coils in front, semi-elliptics in back). You can embarrass many bigger cars on winding, narrow roads, which are of course what the A-50 was designed for.

Girling hydraulics with 2 leading shoes give more than adequate stopping power for this not-so-light small car (2248 pounds dry). The handbrake is strong but awkwardly placed under the wheel and gearshift lever where it could cause a tangle in a bad spot.

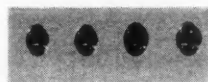
You'll notice a quiet body, even after

your Austin has shaken down, because it has unit construction. (The nearly unavoidable vibration from a 4-cylinder engine tends to have a quick-disintegrating effect on conventional separate bodies and frames.) Front fenders, in deference to Britain's rising accident toll, are bolted on; the feature seems to be at least as practical here. The flat gas tank is nearly vertical, behind the rear seat. We can see an advantage here and a disadvantage too: rear-end collisions are less likely to injure the tank, but any possible leaks are uncomfortably close to the rear-seat passengers.

In dimensions the conventional, overhead-valve 4 is like the new MG's engine

(page 13). Bore is 2.87 inches, stroke 3.5, and displacement 91 cubic inches. Comparing this with the '55 Rambler, which has more than twice the displacement (195.6 cubic inches), we find the Austin doing its share in matters of output. Its 74 pounds-feet of torque are almost exactly half of the Rambler's 150, and it has 50 horsepower compared to 90.

Should you buy one? With power climbing higher and higher on this side of the ocean, your job of comparing an Austin or any other small import with similar U.S. cars is smaller than ever before. Drive those that appeal to you under parallel conditions, and you'll find your answer.



BUICK 4-DOOR RIVIERA HARDTOP

When the 4-door hardtop 1st came out the immediate question it posed to me was: what happens to body strength without the pillar between the front and rear doors? I could appreciate the fact that Buick wanted uncluttered vision from front to rear for driver and passenger alike and that they wanted a car that looked like a convertible with the convenience of the old touring cars. They certainly succeeded.

It's particularly pleasurable to drive with all windows down. Making the design unusually clean, they even left off the push-pull safety knobs, using tiny turn latches on the door panel.

It takes no Jules Verne to predict that 4-door hardtops will soon replace sedans in popularity. Appearance and convenience will force it. During the month of June, Buick produced 9500

WANTING TO SEE how a 4-door hardtop felt after a few thousand miles had been put on one, I borrowed a Buick Century Riviera from the Buick Zone Office in Los Angeles. It had just over 3000 miles indicated, and had been handled by many different people.

Special 4-door hardtops vs. 7300 4-door sedans. The important question then becomes, will we be as safe in these cars, and secondarily, will they tend to creak and groan sooner than the more rigid sedan bodies?

In driving the Buick Riviera I found that the body did not twist and groan like some convertibles, probably due to the steel top absorbing some of the twisting moment. The frame in hardtops is beefed up like that of the convertibles—that is, with an X-member. There is also a colossal brace which runs down between the doors and behind the seat. The 4-door hardtop is more rigid than the 2-door but not quite as rigid as a sedan.

The only creak I noticed came from where the top joins the windshield pillar, while there was also an occasional rattle in the rear doorlatch. I understand that complaints on these are not too prevalent, but it is obvious that you'll have to keep things a bit tighter than you would where there are more points upon which to spread out the load.

Looking at these few drawbacks open-mindedly, an owner will probably accept them for what they are: minor inconveniences you usually have to pay for when you buy beauty—in any form.

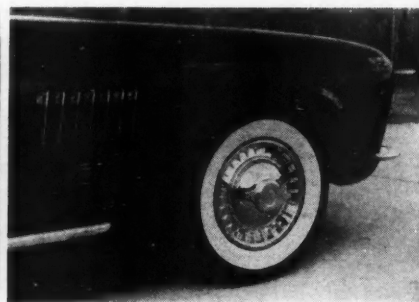
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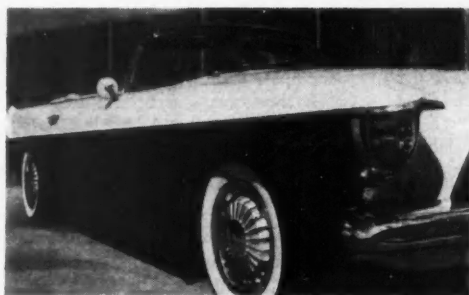
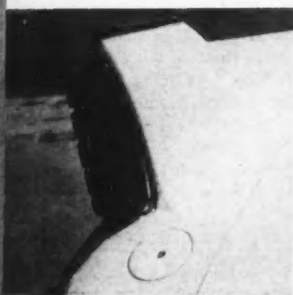
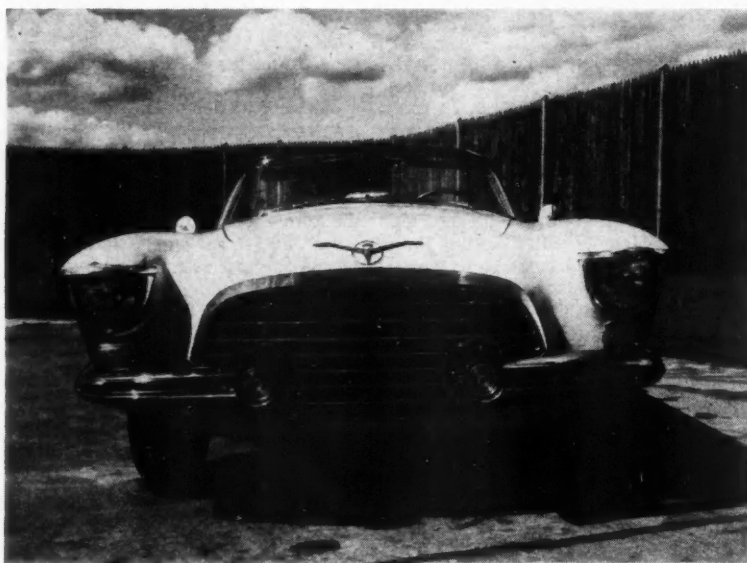
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WHERE THE '56 CHRYSLER'S FEATURES CAME FROM

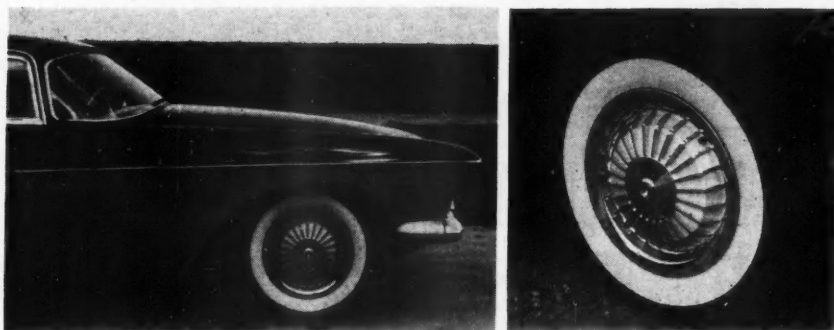
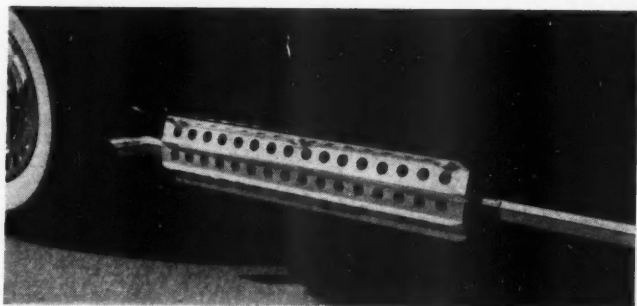
Falcon sports roadster's rear fender is no more radical than stock models'. Lights come from earlier Chia Chryslers. False brake cooling fins lend mechanical look



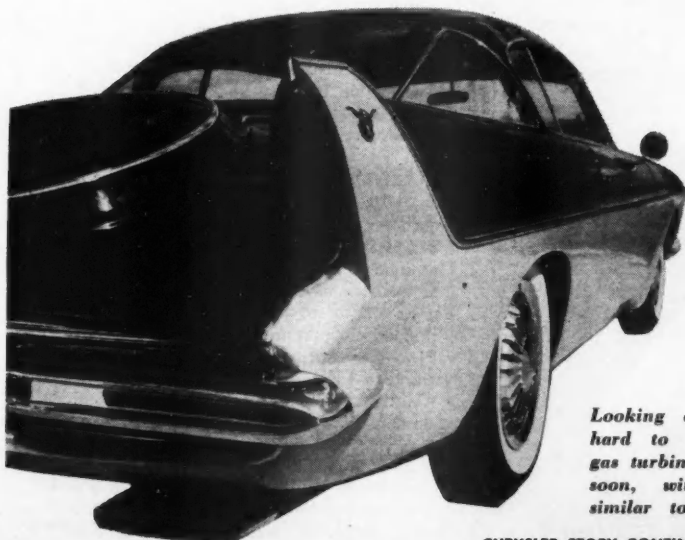
New direction lights, bumper tips of Flight Sweep I sports convertible angle outward (later as on stock Chryslers). At rear, car is like Flight Sweep II (p. 53), with locking gas cap, sharp uplift, 2-part deck



Dual exhausts, once played up on stock
Chryslers and DeSotos, are completely
concealed on the '56s. Falcons exhaust
and muffler may bring them out again



Flight Sweep II sports hardtop has windshield with 56-degree slant, clamshell hoods
over headlights for wedge-shaped theme. Wheel discs should be spectacle in motion



Looking ahead, it's not
hard to predict that a
gas turbine will be along
soon, with a tailpipe
similar to this big one

CHRYSLER STORY CONTINUED ON PAGE 60

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- 52-LF-40—Lincoln OHV to '32-48 Ford & Merc
- LF-40—'49-51 Linc. FH to '32-48 Ford-Merc-Line, etc.
- CRF-52—'51-53 Chrysler V8 to '52-53 Ford & Merc
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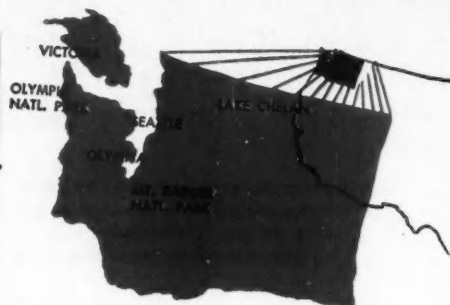
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On the road with DUNCAN HINES

*Washington west or
Washington east—both
are fine for fall vacations*

THE STATE OF WASHINGTON—with its famous Olympic Peninsula, Mt. Rainier National Park, Lake Chelan, and Puget Sound—lures the late vacationist, especially the mountain climber, the fisherman, and the swimmer.

SEATTLE If time permits, by all means go to Seattle. The ships in Elliot Bay and the lumberjacks who come down from the forests to spend their pay remind me of a frontier town as it must have been in the early days of this country.

Places to Eat: Try those famed Puget Sound razor clams at Crawford's Sea Grill (333 Elliott Ave. W.). Open 11 A.M. to 1 A.M. Lunch 80¢ to \$1.50, dinner \$1.25 to \$3. Other famous eating places are the Outrigger Room in the Benjamin Franklin Hotel (this place features Chinese ovens that enable you to see your meal being cooked), Victor Rossellini's restaurant and the Georgian Room of the Olympic Hotel.

You'll most likely wind up your visit to Seattle by taking a boat trip to Victoria, across the line in Canada. Then, by all means, go to the Olde England Inn, where they specialize in real old English dishes—roast beef, English crumpets and Yorkshire pudding. They are open every day from 8 A.M. to 10 P.M. and prefer reservations. Breakfast 65¢ to \$1.10, dinner \$1.75 to \$2.25. They do not serve lunch.

WASHINGTON, D.C. For others who vacation in the fall, Washington, D.C., and its environs have much to offer. There is a great deal to see and do here . . . and some wonderful opportunities to please your palate.

Places to Eat: One of the most famous is Harvey's—open all year from noon to 9:30 P.M. Then there is the historic Occidental, close by the White House, open from 11 A.M. to 1 A.M. The walls are covered with autographs of famous men who have come to Washington in the past 50 years. Less than 2 blocks away you will find the famous seafood place, O'Donnell's Sea Grill. Open

TH Annual International MOTOR REVUE

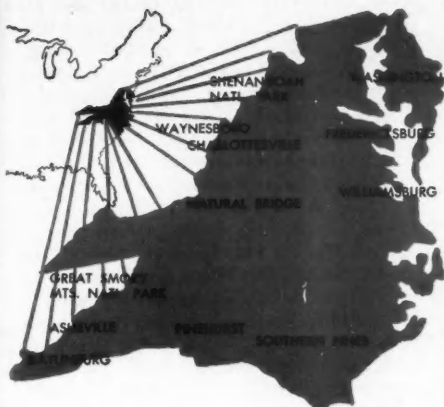
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Lee O. Ryan, Managing Director
Robert E. Petersen, Producer



from 11 A.M. to 3 A.M. Lunch start at 65¢ and dinner at \$1.10.

Places to Stay: Across the Potomac in Alexandria, Va., is the Ainsworth Downs Motor Court (7 miles south of town on Route 1). Rates are from \$3.50 single to \$7 double. The Penn-Daw Hotel is 2 miles south on Route 1. This is a good place to stop for lodging or meals—the rates are very reasonable.

VIRGINIA Swinging south to Fredericksburg, Washington's boyhood home, you travel west to the Skyline Drive, which runs from Front Royal to Waynesboro thru Shenandoah National Park, with its beautiful, sparkling scenery. Stop at Luray Caverns on your way down to Waynesboro, where you will find the Southern Restaurant. It is open every day from 6 A.M. to 10 P.M. Breakfast is from 35¢, lunch from 60¢, and dinner from \$1.45.

After leaving the beautiful Shenandoah, go by Charlottesville, which is near Monticello, Thomas Jefferson's home. Before continuing further south, by all means see Natural Bridge, for which Jefferson is reputed to have paid a mere 20 shillings.

NORTH CAROLINA Continue down into western North Carolina, with its many ranges—the Blue Ridge and the Great Smokies—which are a blaze of ruddy tints in the fall. Asheville is a popular resort center. Here is Vanderbilt's fabulous 12,000-acre Biltmore estate, which can be reached via Highways 19, 23, 70, and 74.

Places to Stay: Davey Motor Court (route 25, 12 miles south), \$5 to \$6 double; Milestone Motor Court (2 miles east), from \$6 double to \$10 for 4; Town-O-Tel Motor Lodge and Tourtel (they also serve meals), both with the same rates—\$5 single to \$9 double.

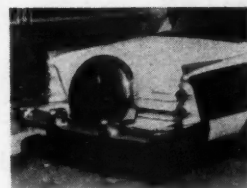
An alternate itinerary would take us to Great Smoky Mountains National Park, high on the eastern border of Tennessee, sprawling over the crest of the Appalachian range into North Carolina. The indescribable hazy blue of the hills blends with the brilliant foliage in autumn. Gatlinburg, a quiet little mountain town, is near the western entrance of the park, which is open all year. Gatlinburg is reached via Highways 71, 73, and 441.

(Continued on page 59)

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53-55 Mercury	3.00	36.50	47.50
54-55 Buick	4.00	37.50	49.50
53-55 Oldsmobile	4.00	37.50	49.50

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Motor ge

by Al Kidd,

Sports Editor

BITTERNESS TOWARD THE AAA was evident when members of the racing fraternity gathered in Indianapolis to discuss their plight. Some representatives felt that the association had let them down; others said flatly that auto racing would be better off without AAA. But like most crises, this one resulted in fast action. Groundwork was laid for a new sanctioning body (which should be in action fairly soon) by choosing a representative committee to draw up by-laws for the proposed organization. Judge George M. Ober, a racing enthusiast, was chosen as chairman of the new group, and represents the public. Col. Arthur Herrington, former AAA Contest Board Chairman, sits on the committee by popular demand. Other members of the Big 7 are Duane Carter (drivers), Herb Porter (mechanics), Bob Estes (car owners), Tom Marchese (promoters), and Tony Hulman (Indianapolis Speedway). The new association intends to sanction stock, championship, sprint, midget and sports-car racing. There is also a strong indication that the group will seek FIA say-so for the U.S. Col. Herrington will probably see that they get it... **Manufacturers** were not represented at the Indianapolis meeting, but a statement by Champion Spark Plug Co.'s R. A. Stranahan

might well be typical. Said President Stranahan, "We yield to no one in our deep sorrow and regret at the tragedies that are a part of racing, but we must disagree with Mr. Sardoni [AAA President] when he states that there is a serious question that racing contributes to better cars or better parts for cars... Our experience shows definitely that the performance of engines in races is a guide to the manufacture of better sparkplugs for every engine... It would take many thousands of hours of laboratory testing to obtain the same data on engines operating under extreme conditions as can be obtained from active participation in one Indianapolis race."... The active **Long Island Sports Car Assn.** is offering its members unique schooling. LISCA rally expert Joe Bracco is currently conducting classes to give his fellow members the lowdown on all phases of rallying... Defending champion **Lee Petty** has finally been ousted from his year-long lead in the NASCAR Grand National Circuit. Petty (now driving a '55 Dodge) has dropped to 3rd place behind **Tim Flock** (Chrysler 300) and **Buck Baker** ('55 Buick). Meanwhile point-leader Flock showed his versatility by driving a Mercedes-Benz to the fastest qualifying time (44.18 seconds) and a 100-mile vic-

tory in a sports-car race on the Raleigh, N.C., mile asphalt track... **Maserati** fans, in particular, should enjoy Maserati Corp. of America's new monthly newsletter, *MCA Racing News*. Free copies for clubs and individuals from MCA at 622 Main St., Westbury, L.I., N.Y.... While owner **Guy Lombardo** watched from the pits, old-pro **Danny Foster** urged the ear-splittingest music this side of heaven out of the bandleader's new Allison-powered boat, **Tempo VII**, to win the Detroit River's famed Silver Cup Regatta. Among the victims: Gold Cup antagonists **Gale V** and **Miss Thriftaway**. Biggest thrill: Mexican Road Race Winner **Ray Crawford's** flat-out, last-lap dashes down the river's fast finishing straight in **Miss Detroit** to twice nose out unsuspecting opponents. Next move for **Tempo VII**: an assault on **Slo-Mo-Shun IV's** 178.497-mph mile speed record... Altho **Russia** turned down a bid to race sports cars at **Oulton Park** this year, British newspapers hint that Soviet driver teams will be in action next year... **Fresno State College** has honored the late **Bill Vukovich** by establishing a memorial scholarship bearing his name for young men who want to teach automotive mechanics... As a result of his superbly consistent driving, **Bob Sweikert** still has a comfortable lead in the AAA National Championship standings. Altho he hasn't won a championship race since Indianapolis, neither has he finished worse than 3rd. At Springfield **Jim Bryan** bettered his chances with another win, but Sweikert was right behind him in 2nd place. The valuable (500 points to the winner) 250-miler at Milwaukee was a showdown. The results: 1st, **Pat Flaherty**; 2nd, **Tony Bettenhausen**; 3rd, the double-crown-bound **Bob Sweikert**... Stock-car racing is catching on in the **Philippine Islands**. The 1st (Continued on page 59)



Classic Car Club of America members line up at Packard proving grounds for annual meet. Club gave Packard trophy for "classic concept of advanced automotive engineering"

what's
coming
up?

october

14-23, International Motor Revue, Los Angeles
16, AAA 100-Mile Champ Race, Sacramento, Calif.
19-29, Motor Show, London, England
29-2, NHRA Nat'l Champ Drags, Great Bend, Kans.

november

4-6, SCCA Appalachian Nat'l Rally, Pa.
6, SCCA Race, Los Angeles
6, AAA 100-Mile Champ Race, Phoenix, Ariz.
20, AAA 100-Mile Champ Race, Las Vegas, Nev.
23-27, MSCA Great American Mountain Rally, New York
26-27, CCCC Race, Palm Springs, Calif.

december

5-11, BAC Speed Week, Nassau, Bahamas

january

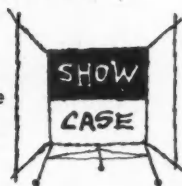
7-15, Automobile Show, International Amphitheatre, Chicago
20-21, SCCA Annual Meeting, Detroit

1956

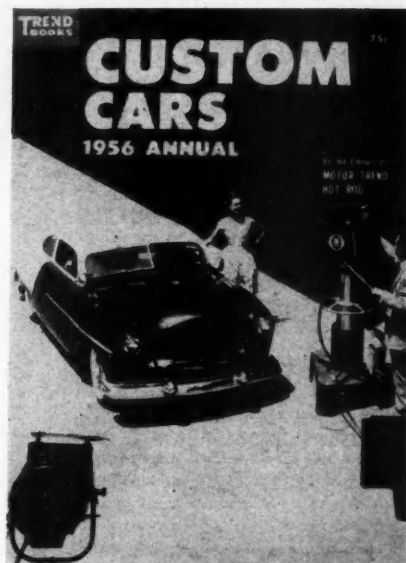
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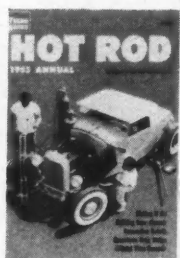
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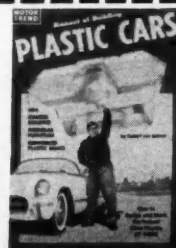
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manual with illustra-
tions of latest
Fiberglass cars.



PAD THAT PANEL

by Don MacDonald

art by Don Fell

A SEEMINGLY TRIVIAL traffic incident—having to jam on our brakes to avoid a car pulling out unexpectedly from a side road—became quite important when our 3-year-old pitched forward against the overhanging ledge of the dashboard. The only damage was a bloody nose and lots of tears, but it could have been a lot worse, and could happen in *any* car not equipped with a padded dash.

MT has plugged the padded dash for a long while, but has never thought of it as more than very essential protection in minor accidents (especially for children) with a bonus in glare reduction. The extent of the protection can vary from minimal (as in current Hudsons and Nashes) to adequate, as in the last of the Kaisers. The majority of makes still do not offer this feature at all.

Convinced of its necessity, we took our DeSoto to trim expert K. E. Binder of Detroit. Six hours later we had a dash nicely padded and covered in genuine leather, colored exactly to match the car's interior. Here's how he did it:

First step is to select a hide of hand-buffed, top-grain leather. Trim shops stock most standard colors, or it can be painted to your exact specifications including degree of gloss. (You can also do it with thriftier plastic, but hear us out 1st.)

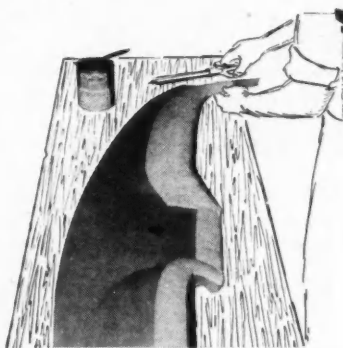
It is possible, but very difficult, to do the job with the panel installed in the car. Best bet is to remove the top (or shelf) of the panel. This comes off readily (photo-drawing



above) once the garnish moldings and trim are out of the way.

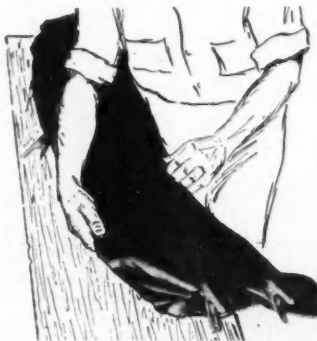
Lay the piece to be covered on the best section of the hide and cut to shape. Leave an excess of 3 inches at the back of the panel and about half that in front.

To achieve a well-padded roll on the front of the panel, Binder took 2-inch-wide strips of 1/2-inch-thick foam rubber (a readily available standard size) and fitted them (top) with "Bull Grip" cement. This stuff sticks like

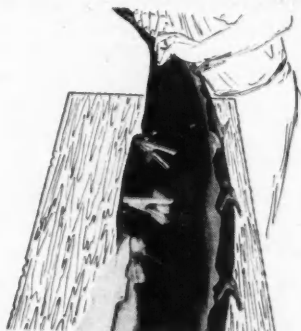


its name when a thin coat is applied to both surfaces. He then shaved the rubber with scissors to smooth out the contour.

The next step is the only tricky part of the procedure; an amateur's usual lack of patience here could botch the job. Put the leather in



place as shown (above) and hold with spread clamps (Hargrave No. 1 or equivalent). Carefully stretch and form the leather around corners (below), and trim off the excess—but be sure it is excess! You will have to cut relief-

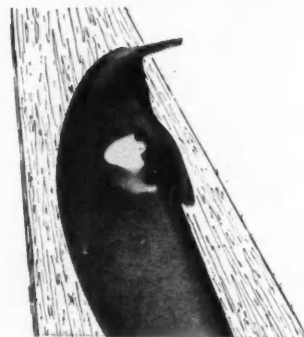


ing slices on sharp bends to avoid puckering.

When the leather is finally fitted, apply a thin coat of Bull Grip to the back of the overlap and its mating surface on the panel. Cementing only on the back will suffice if the

panel has a convex surface, but they seldom do. As on the DeSoto, there are usually concavities and the leather must be cemented in those areas to follow the contour.

You must work fast with the tacky glue. Don't make a mistake in stretching, because if you lift the leather off the panel once it has contacted the glue, paint will come with it. The resulting lumps can't be rubbed out. If everything has gone well, the completed job



will look like this. (It took about 40 minutes of steady rubbing with a soft cloth before the glue would hold the leather on the complex contours of this panel.) Reinstall the panel and your car will be kinder to 3-year-old noses like the example pictured here.



Do you wonder why we chose leather rather than a synthetic material? It was because leather seems to have the edge in resistance to scuffing and abrasion. It is slower to heat and when it does it won't become tacky. It can stand lots of hard knocks without surface cracks or damage. The difference in cost is negligible when you are covering a small area like a panel.

If you don't want to do this job yourself, it shouldn't cost more than \$40 at your local trim shop. For the name of the one nearest you that is recommended by the leather industry, write Upholstery Leather Group, Inc., 99 West Bethune, Detroit 2.

continued from page 56

Motor Mélange

race held in Manila was won by a Studebaker Champion . . . This month entrants will get under way in one of the most difficult U.S. touring trials, the MSCC-sponsored, AAA-sanctioned Great American Mountain Rally. Starting from 11 cities, the rallyists will converge on New York. Then the fun begins: a timed hillclimb, 850 arduous miles of mountain driving, and finally a rugged regularity trial to separate the winner from the top 10 qualifiers. The prize for winning this tough test is an automatic free entry in a tougher one, the 1956 Alpine Trials . . . Rookie Bob Hilmer made I.M.C.A. history when he became the 1st driver in the Association to turn a 1/2-mile track in less than 30 seconds. His new record of 29.70 was racked up on Sioux Falls' Empire Fair Grounds track with a '55 Olds 88 . . .

continued from page 55

On the Road with Duncan Hines

Places to Stay: Here we have a wide choice of motels, hotels and inns. Open all year round is the New Gatlinburg Inn; American plan (with meals) from March 1 to December 1 is \$7 single to \$17 double, daily. This attractive new inn serves meals to transients, from 75¢ for breakfast up to \$3 for dinner. There are also French Village Hotel (\$3 single to \$8 double), Huff's Cottages (\$4 single to \$7 double) and Park Tourist Court (\$5 to \$7 double).

The golfers will be interested in a sojourn in the central part of North Carolina, namely, Pinehurst and Southern Pines. The Hollywood Resort Hotel is in Southern Pines. It is verandahed and has comfortable accommodations. Rates, American plan, are from \$11 single to \$26 double, daily.

"OLD VIRGINIA" This includes the Tidewater country of the coast, abounding with resorts such as Virginia Beach. Williamsburg, which was once the Colonial capital of Virginia, has been beautifully and authentically restored to its 18th century appearance by John D. Rockefeller, Jr. There is much here to delight and interest you, including homes, shops, public buildings (the prison and Governor's mansion) and one of our oldest colleges, William and Mary, founded in 1693.

Places to Eat: The Lafayette Charcoal Steak and Sea Food House is open from 6:30 A.M. to 11 P.M. every day. They have shish kebab, pilaf Oriental style, charcoal-broiled Western steaks and Lafayette salad, among other specialties. Reservations are requested. Breakfast starts at 60¢, lunch at \$1, and dinner at \$1.35.

Places to Stay: The Princess Ann Motor Lodge has 40 units with dining room adjacent. Rates (double) from \$8 to \$12 (lower off-season rates).

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continued from page 31

The '56 Ford

Customline and Mainline continue as before, with 2 and 3 varieties of sedans respectively. All models have a really excellent new instrument panel, which comes optionally padded in "plastic foam." Why Ford deserted their equally excellent "Astradome" speedometer used in '54 and '55 models seems to defy logic, tho.

Of all divisions of the Ford Motor Co., Ford itself has really sparkplugged the current safety program. The safety-dished steering wheel (see page 10) is well-positioned for the average driver, and, unlike Kaiser's earlier version, there is enough diameter to make you feel as tho you have hold of something when cornering. Other safety-minded items include optionally padded sun visors, safety belts, shatterproof mirror, crashproof doorlatches, and stronger front-seat connections.

All power accessories are available and there is a new cowl-mounted air-conditioning system for those who like to Ford around in comfort. For a facelift year, Ford seems to intend to give Chevy no rest.

continued from page 53

The '56 Chrysler Line

BRIEF SPECIFICATIONS

ENGINES: THUNDERBIRD Y8 (standard in 8-cylinder Fairlane and station wagon models only; this is not the engine in the Thunderbird car); Ohv V8. Bore 3.75 in. Stroke 3.30 in. Stroke/bore ratio .880:1. Compression ratios 8.0:1 (with standard and overdrive transmissions), 8.4:1 (with Fordomatic). Displacement 292 cu. in. Advertised bhp 200 (with standard and overdrive transmissions), 202 (with Fordomatic). Max. torque 285 lbs.-ft. (with standard and overdrive transmissions), 289 lbs.-ft. (with Fordomatic). Carburetion: 4 barrel. FORD Y8 (standard in 8-cylinder Custom and Mainline models); Ohv V8. Bore 3.62 in. Stroke 3.30 in. Stroke/bore ratio .912:1. Compression ratios 8.0:1 (with standard and overdrive transmissions), 8.4:1 (with Fordomatic). Displacement 272 cu. in. Advertised bhp 173 (with standard and overdrive transmissions), 176 (with Fordomatic). Max. torque 260 lbs.-ft. (with standard and overdrive transmissions), 264 lbs.-ft. (with Fordomatic). Carburetion: 2 barrel. FORD 6: Ohv. Bore 3.62 in. Stroke 3.60 in. Stroke/bore ratio .995:1. Compression ratio 8.0 to 1. Displacement 223 cu. in. Advertised bhp 137. Max. torque 202 lbs.-ft. Carburetion: single venturi.

REAR-AXLE RATIOS: Standard 3.78 (V8s), 3.89 (6s), 4.09 (all wagons); Automatic 3.22 (all passenger cars), 3.54 (all wagons); Overdrive 3.89 (V8s), 4.1 (6s), 4.27 (all wagons).

DIMENSIONS: Wheelbase 115.5 in. Tread 58 in. front, 56 in. rear. Overall width 75.9 in. Overall lengths 198.5 in. (passenger cars) and 197.6 in. (wagons). Overall heights 58.4 in. (Sunliner and Victoria), 59 in. (Crown Victoria), 60.2 in. (sedans), 62.2 in. (wagons). Turning diameter 41 ft. Overall steering ratio 25.3. Brake diameter 11 in., lining area 180.4 sq. in. (passenger cars), 191.7 (wagons).

BRIEF SPECIFICATIONS

PLYMOUTH

ENGINES: V8: Ohv. Bore and stroke not available at presstime. Compression ratio 8.0:1. Displacement 277 cu. in. Bhp and torque not available at presstime. Carburetion: 2 barrel (4 barrel with powerpack). 6: L head. Bore and stroke not available at presstime. Displacement 230 cu. in. Bhp and torque not available at presstime. Carburetion: Single barrel.

REAR-AXLE RATIOS: Standard 3.73, Automatic 3.54, Overdrive 4.1.

DIMENSIONS: Wheelbase 115 in. Overall width 74.6 in. Overall lengths 204.8 in. (passenger cars), 208.8 in. (wagons). Overall heights 59.3 in. (hardtop), 60.1 in. (sedans), 60.4 in. (wagons). Turning diameters 40.5 ft. (V8s), 40.1 ft. (6s). Brake diameters 11 in. (V8s and all wagons), 10 in. (other 6s).

DODGE

ENGINES: SUPER RED RAM: Ohv V8. Bore and stroke not available at presstime. Compression ratio 8.0:1. Displacement 315 cu. in. Bhp and torque not available at presstime. Carburetion: 2 barrel. RED RAM: Ohv V8. Bore and stroke not available at presstime. Compression ratio 8.0:1. Displacement 270 cu. in. Bhp and torque not available at presstime. Carburetion: 2 barrel. DODGE 6: L head. Bore and stroke not available at presstime. Compression ratio 7.6:1. Displacement 230 cu. in. Bhp and torque not available at presstime. Carburetion: 2 barrel.

REAR-AXLE RATIOS: Standard 3.73 (V8s), 3.9 (6s); Automatic 3.54 (V8s), 3.73 (6s); Overdrive 4.1 (V8s), 4.3 (6s).

DIMENSIONS: Wheelbase 120 in. Overall widths 74.6 in. (passenger cars), 74.1 in. (wagons). Overall lengths 212 in. (passenger cars), 214.3 in. (wagons). Overall heights 59.8 in. (hardtop), 60.6 in. (sedans), 60.5 in. (wagons). Turning diameters 42.3 ft. (V8s), 42.8 ft. (6s). Brake diameter 11 in.

DE SOTO

ENGINES: FIREFLITE and FIREHOME: Ohv V8. Bore and stroke not available at presstime. Compression ratio 8.5:1. Displacement 330 cu. in. Bhp and torque not available at presstime. Carburetion: 4 barrel (Fireflite), 2 barrel (Firehome).

REAR-AXLE RATIOS: Standard 3.9 (available in Firehome only); Automatic 3.54 (Fireflite), 3.9 (Firehome); Overdrive 4.3 (available in Firehome only).

DIMENSIONS: Wheelbase 126 in. Overall widths 78.3 in. (passenger cars), 79.1 in. (wagon). Overall lengths 220.9 in. (hardtops), 218.6 in. (wagon), 217.9 in. (sedans). Overall heights 59.9 in. (hardtops), 60.6 in. (sedans), 62.2 in. (wagon). Turning diameter 43.8 ft. Brake diameter 12 in., lining area 251 sq. in.

CHRYSLER

ENGINES: NEW YORKER: Ohv V8. Bore and stroke not available at presstime. Compression ratio 9.0:1. Displacement 354 cu. in. Bhp and torque not available at presstime. Carburetion: 4 barrel. WINDSOR: Ohv V8. Bore and stroke not available at presstime. Compression ratio 8.5:1. Displacement 331 cu. in. Bhp and torque not available at presstime. Carburetion: 2 barrel.

REAR-AXLE RATIOS: Standard 3.73 (available in Windsor only); Automatic 3.36 (New Yorker), 3.54 (Windsor); Overdrive not available.

DIMENSIONS: Wheelbase 126 in. Overall widths 81.0 in. (New Yorker passenger cars), 79.1 in. (Windsor wagon), 78.8 in. (Windsor passenger cars). Overall lengths 224.2 in. (New Yorker hardtop), 223.4 in. (Windsor hardtop), 221.2 in. (New Yorker sedan), 220.4 in. (Windsor sedan), 220.3 in. (New Yorker wagon), 219.5 in. (Windsor wagon). Overall heights 59.9 in. (Windsor hardtop), 60.1 in. (New Yorker hardtop), 60.6 in. (Windsor sedan), 60.9 in. (New Yorker sedan), 62.0 in. (Windsor wagon), 62.2 in. (New Yorker wagon). Turning diameter 43.8 ft. Brake diameter 12 in., lining area 251 sq. in.

IMPERIAL

ENGINE: Ohv V8. Bore and stroke not available at presstime. Compression ratio 9.0:1. Displacement 354 cu. in. Bhp and torque not available at presstime. Carburetion: 4 barrel.

REAR-AXLE RATIO: Standard transmission not available; Automatic 3.54; Overdrive not available. (Modified Hotchkiss-type axle.)

DIMENSIONS: Wheelbase 133 in. Overall width 78.8 in. Overall length 229.6 in. Overall heights 60.4 in. (hardtop), 61.2 in. (sedan). Turning diameter 43.8 ft. Brake diameter 12 in., lining area 251 sq. in.

(Christmas Gift Suggestions Advertised by Newhouse Automotive Industries)

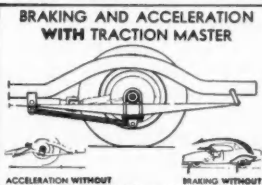
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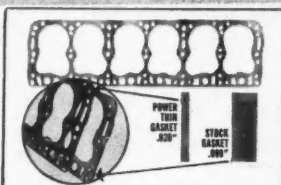
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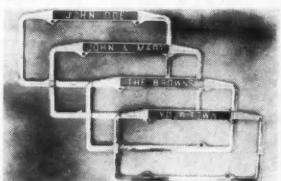
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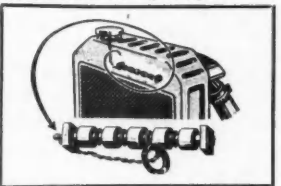
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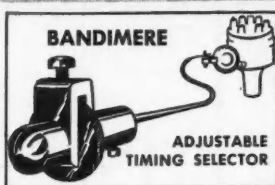
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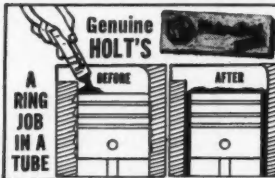
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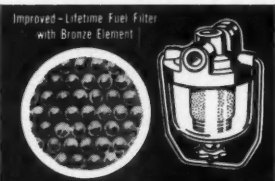
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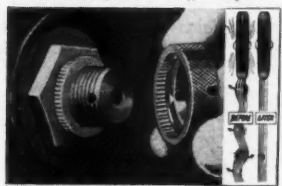
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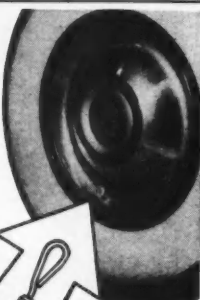


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continued from page 32

The '56 Mercury

of ¾-inch-lower crown, a hardtop coupe, and the 8-passenger wagon with simulated wood (Fiberglas) side trim.

The lineup in the Custom series is more extensive, what with a couple of wagons (6 and 8 passengers), 2- and 4-door sedans, a hardtop coupe. Then there's the Medalist. This surprisingly good-looking "price leader" 2-door is aimed at the buyer who wants Mercury's size and performance without paying for gobs of chrome trim.

Evidence of Ford's new Injury-Prevention-Crash Program is in the inset hub on the steering wheel, the optional padded dash panel, provisions for seat belts, padded sun visors, and doorlocks designed to stay closed in the event of a crash. Even the rear-view mirror is now made from shatterproof glass.

Last year and this year both, the wheel is a bit higher than on some competitive makes. An interesting sidelight on the steering wheel position (and one already being talked about in Detroit) is that you can replace the "dished-in" wheel with a standard straight-cross-bar wheel and get it right down in your lap. Instruments are still a high, fan-shaped cluster, rating just as high on the legibility scale. Forward vision thru the wrap-around windshield and over the hood remains good.

The '56 Mercury remains a delightfully easy car to drive, with little effort required to whip it around. On the extremely high-crown road at Ford's test track it didn't pull excessively to the downhill side. Car tracks still have little effect on the car's forward motion.

If roadability suffers from the slight revalving of the shock absorbers (to create a somewhat softer ride), it is by only an infinitesimal amount. In driving a '55 Mercury around the handling course, and immediately after pushing the '56 Montclair thru the same turns, I could frankly feel no difference. Body lean on the sharpest of turns is not on the excessive side of the ledger. The ride of the '56 Mercury is unnoticeably changed over the fairly soft ride of the '55s.

The slight revalving of the shock absorbers on the boulevard side is the only change in a chassis that was all-new in '55.

Built-in understeer causes the car to go into a 4-wheel drift under stress rather than to break loose at the rear wheels. When purposely forced to break away, its power and steering response feed it back on the course before you get into serious trouble. Crosswinds certainly won't buffet you.

The well-proved ball-joint front suspension is continued, lubricated, if you want, by the optional Multi-Luber (MT, Feb. '55). Incidentally, this accessory has proved very successful on Lincoln and Mercury cars, so Lincoln Engineering Co. (no relation) is making it available in kit form for

installation on other makes. (More about this in a future issue.)

There's no floating over dips or bumps, no excessive dive when you stand on the brakes.

Mercury has switched over to a fixed anchor type of brake, not so much for better braking, but to cure a production headache chronic with the old "heel and toe" design. Tricky installation procedures caused too many '55s to leave the factory with mal-adjusted brakes.

All power accessories are available with a new 12-volt electrical system to take care of them. The power brake unit now has a poppet valve which gives longer retention of the vacuum reserve when the engine is off, such as for overnight parking. The optional air-conditioning system this year features a part-time compressor, but the evaporator is still in the back end taking up trunk room. Separated installations like this are perhaps more efficient, but they are also more costly. The trend is to cowl mounting of all components, except, of course, the compressor and condenser.

The Mercury story is certainly a success story. Starting out in 1939 as a kind of deluxe Ford, it really got going in 1949 with styling and size more akin to Lincoln than its low-priced cousin. Despite a '52 change back to the use of many Ford components, sales have steadily climbed from an introduction-year low of 68,868 to 1955's record of 270,170 (as of August 31). Merc appeals most to the luxury-minded buyer, with over 75 per cent of sales being top-line Montclairs and Montereys. Sporty models are the most popular of these, hardtops accounting for 46 per cent of production.

As if it needed any, more new life blood has been injected by making Mercury a full-fledged division of the parent Ford Motor Co. Six hundred new dealers have been added (bringing the total to 2600) and many of these will handle Mercury only. This increased market penetration should more than make up for sales resistance in a facelift year.

—Walt Woron and Don MacDonald

BRIEF SPECIFICATIONS

ENGINE: Ohv V8. Bore 3.80 in. Stroke 3.44 in. Stroke/bore ratio .905:1. Compression ratios 8.1:1 (with standard and overdrive transmissions), 8.4:1 and 9.1:1 (with Fordomatic; different ratios are for use with regular and premium gasoline, respectively). Displacement 312 cu. in. Advertised bhp 210 @ 4600 rpm (with standard and overdrive transmissions), 215 @ 4600 rpm (with Mercomatic, for regular gasoline), 225 @ 4600 rpm (with Mercomatic, for premium gasoline). Max. torque 312 lbs.-ft. @ 2600 rpm (with standard and overdrive transmissions), 317 lbs.-ft. @ 2600 rpm with Mercomatic, for regular gasoline), 324 lbs.-ft. @ 2600 rpm (with Mercomatic, for premium gasoline). Carburetion: 4 barrel.

REAR-AXLE RATIOS: Standard 3.73, Automatic 3.15, Overdrive 4.09.

DIMENSIONS: Wheelbases 119 in. (passenger cars), 118 in. (wagons). Tread 59 in. front, 58 in. rear. Overall width 76.4 in. Overall lengths 206.4 in. (passenger cars), 202 in. (wagons). Overall heights 58.6 in. (all hardtops), 58.7 in. (Monterey and Montclair sport sedans), 60.6 in. (Custom and Montclair sedans), 62.4 in. (wagons). Turning diameter 43.2 ft. Overall steering ratio 25.4.

SPECIAL

Christmas

SAVING

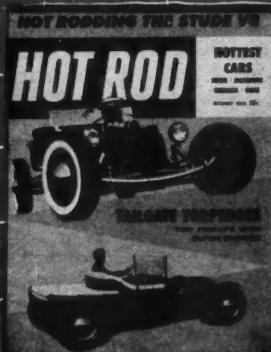
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Fold-out spare hidden in trunk moves up and out, ending up in horizontal position

continued from page 38

A Modern Classic

Ford at the start, there were razor-sharp engineer Harley Copp and top-notch stylist John Reinhart. When styling was finalized—more on this presently—Cord designer Gordon Buehrig was brought in to engineer the body. Production was planned by management expert Ben Mills.

On the surface, these men had free rein within their bailiwick, but being charged with the resurrection of an ideal is not always easy. They knew that the car they designed would never reach production unless it fully satisfied the Executive Committee of the parent company. Henry II expressed it best when he said to Bill: "If you find the style of car that is the Continental, our decision will be unanimous."

Continental people like to describe the car as "modern formal." We expect it to be criticized by those steeped in the school of current Detroit styling. Harley Copp admits that "the decision to like it comes from within." He goes on to predict that "the car will appeal mostly to people who inherited their father's liking for the Mark I. It is an expression of their individualism . . ." That much is true.

Our only disagreement is that our fathers have no corner on "liking" the Mark I. The new Continental is certainly not a car that caters to the public whim, either in styling or its probable 5-figure price tag.

Take, for example, Reinhart's choice of seating package. It could have been well forward like a Greyhound bus, or amidships like all current American cars. Instead, John chose to place the driver well back to assure himself a hood worthy of the Continental name. He wanted a wrap-around windshield, but felt that the driver

should be close to it for a feeling of "oneness" with the car. A vertical A post would have moved the shield and panel 6 inches forward, not to mention negating the long hood.

The drawings specified, and Gordon Buehrig's staff created, an A pillar slim enough to be the envy of the industry, including other Ford divisions. Look at the Continental from a 2nd-story window, and you will see that no attempt has been made to "fill out the cube," a stylist's expression for the characteristically straight leading and trailing edges of most American cars.

Styling is as crisp as Pascal celery from the trademark on the hood to the semi-false tire housing. Our only quarrel is with the grille, which is jewel-like from close up, but tends to lose its identity when viewed from a distance. Things like this can happen when a car is created within the narrow confines of a styling studio; one can't stand far enough back to judge that intangible called "road appeal."

Interior finish is par for the course. Instruments are round and functional, serving their purpose without the distraction of being the center of attraction. The leather and nylon broadcloth or matelasse interiors abound with beautifully finished details that are the expected hallmark of an essentially custom-made car. In certain colors, particularly gray, the leather in the panel and molding trim lacks the richness of that used in the earliest Mark I's. Any deficiency here is more than made up for by the deep pile carpets everywhere there is floor area (including the trunk); by the tailored headlining, door, and rear quarter panels; and even ashtray lids that are weighted for just the properly impressive closing clunk.

The car was built to endure, both esthetically and mechanically. Now that the job is completed, the creative end of the Continental Division is noticeably relaxed.

Except for detail changes, and possibly other body models, the car will continue as is into the foreseeable future. They don't even have to worry about public acceptance; enough orders are on hand to account for many months of 10-cars-per-day production. A "Mark III" is under discussion, of course, but with no immediate urgency. John Reinhart's job is somewhat akin to that of the man who styles the Rolls-Royce—perfecting and perpetuating something that is already fundamentally good.

In matters of engineering, Harley Copp has much the same attitude, altho he has moved on to Lincoln and his job has been taken over by Harold W. Johnson. As he expresses it, "The Continental is not full of engineering innovations like, for example, the Tucker. It is a refinement of conventional practice." Taking a much overdue swipe at usual sales techniques, Copp goes on to say that "the innovations we have won't be talked about. We are selling the package, not single features." His remarks are borne out by the fact that Continental is not announcing horsepower or torque, and does not intend to at any time in the future.

A dressed-up (chromed valve covers, aircleaner) but dimensionally stock Lincoln engine is used with one all-important difference. Every powerplant represents the cream of the Lincoln production crop. The pieces in it test the highest, the tolerances are the finest, and it is assembled with the care that stems from a bigger budget. The same applies to transmission (Lincoln's Turbo-Drive is standard) and running gear.

The 126-inch-wheelbase chassis is Continental's own, conventional except for unorthodox Y-frame and tubular cross-member bracing, and the "cow belly" shape dear to the heart of body designer Buehrig. This gave him the room to provide chair-height seats in an unusually low car. A rather complicated driveshaft involving 3 universals feeds into a Hotchkiss rear. We know for a fact (see Letters, Sept. MT) that mechanical prototypes have each been road-tested for 10,000 miles and more, ensuring the kind of reliability that becomes a car meant to be kept indefinitely rather than replaced yearly.

An enthusiast's car but in no sense a sports car, the Continental was deliberately engineered for the utmost in silence and comfort. This was apparent when we drove it. It is designed to handle in a manner consistent with the demands of a skilled driver on U.S. highways, but not for road races. Every engineering detail is there to make driving (and more particularly, owning) a Continental something much more than just fulfilling one's need for transportation.

This achievement is in the package, and, as planned, does not stem primarily from any of several features. But even such a current ultimate in U.S. styling and engineering would be no good without equivalent care in production. Let us examine the paint. The body-in-white is

first bonderized. Then it gets a coat of primer, followed by wet sanding. Next comes a coat of surfacer, followed by another wet sanding. Color finally appears with 2 double coats of lacquer, buffed down by oil sanding. The body returns thru the spray booths and ovens for another double coat of lacquer and oil sanding. Finally it is waxed. This paint job in its entirety takes more man hours than are required to completely assemble, ready for the road, the whole of a conventional "high-priced" car.

Despite such costly methods, Continental Division expects to make money. It is in no sense a car to be marketed at a loss for its prestige value to the Ford Motor Co. Harley Copp explains it this way: "We do not intend to throw away the rules of business. There is a discipline to this that ends up helping the car. It achieves an enduring business which the customer has every right to expect."

"We could have incurred a large production cost. Suggestions like putting in a de Dion rear were looked at in a cold business way. Was the de Dion worth another \$500? Our product committee thought not. Neither did they think nickel-plating the undergear very honest. We were not after the blank-check approach, but economically sound accomplishment of an object."

John Reinhart furnishes another example: "A modern version of an open spoke wheel was dear to my heart, but the cost could only be justified by the need for brake cooling. The Continental brakes didn't need any additional cooling, so we ended up with a much less expensive hubcap that simulated my ideas."

We can't help but agree that this kind of approach makes even a \$10,000 automobile seem more of a bargain. Our hats are off to a modern classic.

—Don MacDonald

BRIEF SPECIFICATIONS

ENGINE: Lincoln ohv V8. Bore 4.0 in. Stroke 3.66 in. Compression ratio 9.0:1. Displacement 368 cu. in. Bhp and torque not to be announced.*

DRIVE TRAIN: Transmission is Lincoln Turbo-Drive automatic. Differential is Hotchkiss type.

RUNNING GEAR: Steering: Saginaw power, overall ratio 22.1:1. Springing: Coil front, semi-elliptic rear. Tires: Special Firestone tubeless, 8.00 x 15. Brakes: Dual-servo, power-assisted hydraulic.

DIMENSIONS: Wheelbase 126 in. Tread 58.5 in. front, 60.0 in. rear. Overall width 77.5 in. Overall length 218.4 in. Overall height 56 in.

PRICE: Not yet announced. Delivery on special order from any Lincoln-Mercury dealer. Car prepared at factory for immediate customer use, including wheel balancing, tune-up, and wax. No dealer servicing should be necessary until 2000-mile check.

ACCESSORIES: STANDARD: Automatic transmission, power steering and brakes, power windows and front seat, radio, dual heaters, custom quality whitewall tires, any upholstery and paint option available. **OPTIONAL:** Air conditioning.

*Engines used in Continentals (also transmissions and differentials) are carefully selected from regular Lincoln production line. They undoubtedly meet and probably exceed Lincoln's advertised 285 horsepower and 401 pounds-foot torque.

IN NOVEMBER HOT ROD THE BONNEVILLE SPECIAL ISSUE OF THE YEAR

Here, the Hot Rod staff has gone all out to give you the most complete coverage of this, the "World Series of Drag Racing"—Eight full pages pictorially illustrated with all timing records given and details of winning cars described.

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TECHNICAL SERVICE

By the
**MT RESEARCH
STAFF**

Note: We are way behind in answering mail sent in to this column, but we are doing our best to catch up with it. Write your question on only one side of the paper to enable us to answer it on the reverse side. Along with it, send a self-addressed stamped envelope. We can answer only those inquiries limited to one specific question dealing with one particular subject or problem.—Editor

QUESTION—Can you give the ignition timing for the '55 Cadillac you ran in the road test? (It was done at sea level, I presume.) Also, how many degrees advanced should ignition be set for 7000-foot altitude? W. C. Hulyer, Eagle, Colo.

ANSWER—The Cadillac we ran for the road test was set up according to factory specifications, which work best at sea level. For high altitude performance it is customary to advance the distributor 5 to 7 degrees ahead of the sea level settings. For best performance it is also necessary to use leaner jet settings in the carburetor.

QUESTION—I have a '52 Nash Ambassador. What increase in hp can I expect from milling the head .060 inch and installing a ¾-race cam? C. Milstead, Ft. Myers, Fla.

ANSWER—The conversion you wish to make should give about 25 extra hp. You can mill .090 inch, which will give about 8.3 to 1 compression ratio and about 5 more hp.

QUESTION—How much can I mill the heads of a '54 Mercury without getting into trouble with most premium gasoline? R. Convery, Detroit.

ANSWER—Milling the Mercury heads .060 inch will give a compression ratio of slightly more than 8.25 to 1. The manifold will also have to be milled to allow the ports to line up properly. With this added compression a gain of about 10 hp can be expected.

QUESTION—I own a '54 Ford 6 Country Sedan with Fordomatic. This car is underpowered for my use. What is your suggestion for a conversion that in effect would give me an excess of power over the stock engine? A. J. Disch, St. Louis, Mo.

ANSWER—Milling the head .060 inch and installing a ¾-race cam will give considerably better performance. You can also install a dual-carburetor manifold for added power.

QUESTION—Someone told me that by grinding the rocker arm shaft supports on an overhead-valve V8 engine a higher valve lift could be obtained. Is this true? J. C. Myers, Seattle, Wash.

ANSWER—Don't believe a word of it! The only thing that will change valve lift is changing the cam lift or the rocker arm ratio. Grinding the rocker arm shaft supports would get you into trouble with pushrod length—among other things—and wouldn't help valve lift a bit.

QUESTION—My '52 Olds 88 has been bored to 3 13/16 inches, giving 335 cubic inches, and the heads have been ground .090 inch. What compression ratio and about how much horsepower do I have now? R. E. Riley, Johnston, R.I.

ANSWER—You have about 9 to 1 compression ratio and assuming the engine is properly tuned, you should be getting about 220 horsepower (conservatively figuring).

QUESTION—I want to install a Cadillac engine in my 1952 Pontiac convertible. What model Cadillac shall I use, and will it fit my Hydra-Matic? J. Horner, Crawfordsville, Ind.

ANSWER—You can use any Cadillac engine from '49 up. If you use your present Hydra-Matic you will have to use the Cadillac torus and bell housing. We suggest that it may be better to use the Cadillac Hydra-Matic ('52 and later have Dual Range) because it has more plates in the clutches than the Pontiac. All the bolt holes, etc., will line up so no trouble should be expected in assembling your new setup.

QUESTION—I own a 1954 Volkswagen and have been having trouble with cam roller wear. I suspect defective material to be the fault; however, my dealer blames the high detergent oil I use. I know the oil I use has a much higher film strength than the oil he recommends. I am certain oil has no bearing on the matter. Do you have any suggestions or advice to give? B. K. Peters, Jackson, Miss.

ANSWER—This letter is typical of many we have received on this subject. Without casting aspersions on the makers and users of high detergent oils, we suggest that Volkswagen owners use the oil the dealers recommend. According to information given us by a Volkswagen distributor, the factory does not recommend the use of high detergent oils. Inasmuch as Volkswagen owners who have been using the factory-recommended oils have had very little cam roller trouble it is our belief that most of the difficulty is wrong oil and not defective material.

QUESTION—I have trouble with the outside edges of my front tires wearing excessive-

ly. The car is a 1955 Ford Customline V8, with 6.70 x 15 tires. I have recently had the front end checked for alignment, and I carry 30 pounds of air pressure. *R. Porter, Grayling, Mich.*

ANSWER—"Barreling" around corners even if the front end is properly aligned will scuff the front tires very rapidly. Assuming, however, that you don't scream around corners, excessive camber or an excessive toe-in condition will cause outside edge scuffing. The toe-in should be adjusted with the car laden with a weight of at least the equivalent of 2 people, or whatever you usually carry.

QUESTION—If the vacuum side of a double-action fuel pump is not functioning properly, will it cause oil to blow out the breather pipe? I have a 1950 Olds 88. *K. Nyberg, U. S. Army.*

ANSWER—Probably not. A leaking diaphragm on the vacuum side of the fuel pump will cause excessive oil consumption by letting oil be sucked into the intake manifold. Usually this condition causes fouled spark-plugs, lots of smoke, and a bad-running engine. Oil fumes blowing out the breather generally indicate poor piston rings; the engine then needs an overhaul.

QUESTION—I have a 1951 Plymouth. Sometimes when I start my engine when it is hot, I hear an explosion-like noise under the hood and the engine either stops or begins to miss badly. When I raise the hood and investigate I find the distributor cap is loose. What causes this? *R. Spode, Cheyenne, Wyo.*

ANSWER—The cause is a punctured diaphragm in the vacuum advance mechanism on the distributor. This lets some of the explosive mixture from the intake manifold leak into the distributor body. When enough of the mixture is present, sparks from the rotor or points cause the explosion, the cap is dislodged, and the engine either stops or misses, as you have described it.

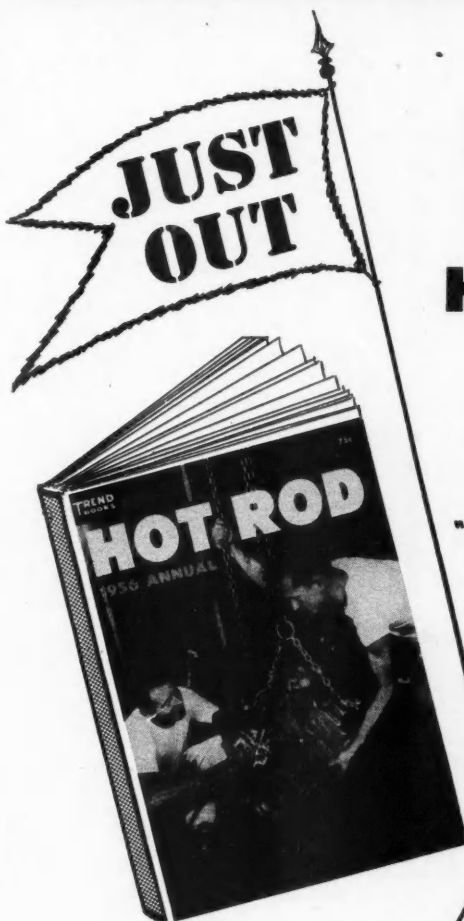
QUESTION—Perhaps you can settle an argument. A friend of mine tells me that tires with greater than recommended air pressure will hold the road better than tires that have less than recommended pressure. I contend that he is all wet. What do you say? *H. Johnstone, Coon Rapids, Iowa.*

ANSWER—Sorry, you lose. Research in recent years shows that cornering power increases considerably as the tire pressure is increased. Of course some personal comfort will be sacrificed with higher pressures and the shock absorbers and springs must be good enough to prevent loss of contact caused by hopping of the wheels over unusually rough surfaces.

QUESTION—How can I invert the gearshift lever on my '54 Plymouth so that high and low gear positions are "down"? I have known others who've inverted gearshift levers with high and low positions up! Would a gear-like arrangement work on this? *George Hansell, Carversville, Pa.*

ANSWER—All you have to do to change gear positions is reverse the direction of the lever arms on the transmission and connect up in the usual manner. But why?

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continued from page 29

Darlington

cars in the starting lineup. The Buicks stirred up a lot of interest with their fine 1st day qualifying—Fireball Roberts won the pole at 110.628 mph, and former Darlington winner Buck Baker got the middle of the 1st row with 109.489. Both of these drivers were considered fully capable of winning. The Buicks were fast enough to win but, like the Chryslers, were plagued with tire wear. Roberts shot from his pole position into the lead, lost it to the Flocks, then stayed right with the front runners until he blew a front tire and crashed into the guard rail. Baker led the race for a time, had a terrific duel with Turner, ran with the top 10 thruout the race, and wound up a creditable 6th. Baker might have done even better had it not been for tire wear. After only 65 laps he was in the pits for new rubber, and the tires removed from his Buick showed entire strips of tread torn out. The Buicks were fast, but repeated pit stops kept it from being their day.

The only other car given a real chance to win was perennial favorite (10 cars in the starting lineup) Oldsmobile. Speedy Thompson qualified an Olds into the 1st row at 108.799 mph, and Banjo Mathews was one of the very fastest qualifiers with a 110.061 mph. In addition Olds had a fine lineup of drivers in Joe Eubanks, Jim Paschal, Jim Lewallen, and Junior Johnson. As always, the Oldsmobiles ran very smoothly, not seriously challenging the leaders, and apparently hoping to be around in force when the others failed. Had they not spent so much time in the pits they could have given Chevrolet some serious trouble.

Other makes were represented, but were never in contention. Dodge's hopes rested with NASCAR Champion Lee Petty, and altho his car lasted the distance it was not running up to par. A couple of new Plymouths were on hand (fastest qualifier 98.243 mph) and one finished (not among the leaders).

The lone Cadillac entry (qualified at 106.052 mph) was very hard on tires, and seemed to spend as much time in the pits as on the track. The fastest Mercury qualified at only 104 mph and was clearly outclassed. A single '53 Studebaker entry started at the rear of the pack and lasted less than 50 miles. One-time stock car champion Hudson was represented by 3 cars (no '55s) but the Chevy-Ford pace was too hot for them.

Of some interest was the '54 Nash Rambler driven by Bill Bowman to a 92.376 qualifying speed. The car ran flawlessly thruout the race, turning laps at about 85 mph, and lasted thru the 500-mile grind to beat out many obviously faster cars. Rumor had it that Pontiac company officials on hand didn't expect a win from their 3 qualifiers (100.835 was

the fastest) but were looking for successfully speedy developments in their stock car racing future.

Other Darlington Data: Next to the cars themselves, the next most-discussed topic was tires and tire wear. The new Firestone Super Sports (with long, even-wear characteristics) were scarce and cars without them were definitely have-nots. These tires were good enough to last thru the race on the Chevys, but not on the heavier cars. The entries not having the fancy equipment epitomized by the Kiekhaefer team were very hard-pressed in the pits when changing tires. Pre-race worries about tires proved more than justified.

Suspension changes on the cars (double shocks, Air-Lifts, general beefing-up, etc.) are permitted. Engines and drive trains can be modified with any part listed in factory manuals. The Chevys, for example, in addition to using Corvette equipment, have a wide range of rear axles. They can use standard Chevy, Chevy trucks, and, conveniently enough, catalog-listed Oldsmobile variations. (Both Thomas and Reed used 3.9 axles.)

For the NASCAR technical inspection, it is required that one head, 2 valves and the camshaft be removed from an engine. Inspectors say that hot cams, overbore (.030 inch is allowed) and oversized fuel tanks are the most frequent violations. In general, the cars are slightly modified, inspections are moderately thorough, and violators are few and far between.

Representatives from Cornell University's automotive safety research staff were on hand to check safety features and examine cars that had been involved in accidents (also see "Spotlight," page 10). Some interesting reports may come out of these inspections. NASCAR safety requirements are the usual crash helmets, safety belts, roll bars and securely fastened doors, hoods and trunks. Despite several dangerous-looking accidents, no driver was critically injured.

Crowd control was excellent, the width of the Darlington track plus large safety aprons allowing a good margin of safety. Altho yellow flags were numerous, the NASCAR policy of a controlled procession (a safety car pacing the field in single file) during accidents is a safe, effective, and fair procedure.

—Al Kidd

DARLINGTON DATA

1. Herb Thomas	Chevrolet
2. Jim Reed	Chevrolet
3. Tim Flock	Chrysler
4. Gwen Staley	Chevrolet
5. Larry Flynn	Ford
6. Buck Baker	Buick
7. Jake Maness	Chevrolet
8. Cotton Owens	Chevrolet
9. Bill Widenhouse	Chevrolet
10. Jim Massey	Chevrolet
11. Banks Simpson	Buick
12. Joe Eubanks	Oldsmobile
13. Marvin Panch	Chevrolet
14. Nace Mattingly	Ford
15. Jim Lewallen	Oldsmobile
16. Ralph Liguori	Mercury
17. Banjo Mathews	Oldsmobile
18. Dave Terrell	Oldsmobile
19. Bud Graham	Chevrolet
20. Bill Champion	Buick

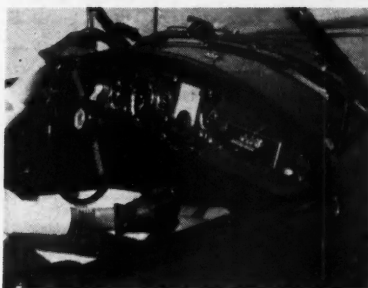
continued from page 13

Pretty Baby



English miss looks pleased with right-hand-drive version of new A. Note engine vent

Luggage-rack-equipped MG-A gives even more carrying space than stock model. Dash is now more functional than before



GORDON WILKINS

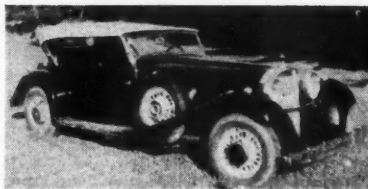
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'37 CORD supercharged phaeton. Beautifully restored 2 yrs. ago at cost of over \$3000. Sacrifice for \$1500 or trade for clean station wagon. John G. Vogeler, 34-41 85th St., Jackson Heights, N.Y.
'41 LINCOLN CONTINENTAL coupe; exc. cond. Only 43,000 actual miles; new Royal Master wvs, Borg-Warner o.d., r & h, '48 V-12 engine. \$2000. Dick Wormhoudt, 9 Park Lane, Ottumwa, Iowa.
'46 LINCOLN CONTINENTAL conv., orig. V-12. Needs work. New top, good uph., new paint and white sidewalls. Best offer over \$1100. Charles Spross, 2316 Barrington Dr., Toledo 6, Ohio.
'22 FORD Model T beach wagon; excellent rubber, runs good; photo 10¢. Offers wanted, cash or trade, classic or antique. Now registered. Walter E. Hoxie, 53 Rolfe St., Cranston, R.I. Phone Williams 1-7430.
'48 LINCOLN CONTINENTAL hardtop. R & h, o.d., wvs. Exceptional cond., ironclad proof 1 owner. 25,500 mi. \$1850 or best offer. J. B. Snyder, 34 Franklin Bldg., 5 Guilford Ave., Baltimore 2, Md.
'42 LINCOLN CONTINENTAL conv. New '46 V-12, o.d., new Alpine white paint, black top, wvs, r & h, good uph. \$1600. T. A. Mathews, S. Main St., Assonet, Mass. Mitchell 4-5592.
FORD T PARTS. Widest range, lowest prices. Free mimeographed listing sent to T owners. Also, Ford A mechanical parts listing available free. E. Hennings, 1036 Hampshire, Quincy, Ill. Baldwin 2-1461.
'37 MERCEDES-BENZ 540-K 5-pass. conv. Exc., orig., supercharged, sidemounts, 6 exc. tires, radio, leather uph., orig. tools, luggage. Acquired from owner. Pix 50¢. J. Seto, 4508 Navajo St., Denver 11, Colo.
BUGATTI Type 51-A 1½ liter, supercharged, 8 cyl., twin cams, orig. monoposto body, Jaeger tach, Bugatti instruments, 16" wire knock-off wheels, exc. cond. Pix 25¢. J. Seto, 4508 Navajo St., Denver 11, Colo.

AUTORAMA souvenir program. Popular demand reprint, collectors' item. Over 100 pictures & stories, cars featured at great enthusiasts' production. \$1 cash or money order. Joe Kizis, 215 Broad St., Milford, Conn. Dept. M.
'34 FORD phaeton. New top, uph., brakes, paint; very sharp; wvs. Can be driven anywhere. Ideal collectors' item. \$600. Glenn Vally, New Lenox, Ill. Phone 5921.
'47 LINCOLN CONTINENTAL hardtop. Everything orig. Light gray, wvs. Exc. body & chrome. \$1000. Theo Wells, 612 W. 10th St., Metropolis, Ill. Phone 2188 or 4741.
'46 LINCOLN CONTINENTAL hardtop. All orig. except engine ('51 Cadillac). Extra clean inside & out. Never been hit. Black with wvs. \$1750. Theo Wells, 612 W. 10th St., Metropolis, Ill. Phone 2188 or 4741.
'41 HUMPHREY Skylark 4-dr. sed., with Cord-style body in exc. cond. Has been partially de-chromed. \$375. Jim Meade, 224 Furlong Rd., Rochester, N.Y.
'37 CADILLAC V8 conv. sed. 6287 mi. on rebuilt engine. Top, chrome, leather uph. exc.; orig. lacquer good; tires poor. Glass partition. 2 owners. \$500. David Y. Miller, 115 Todd Ave., Charlottesville, Va.
'38 MERCEDES-BENZ classic Model 540-K. Super-charger, new paint, new top, new uph., exc. cond.



Just brought from Europe. Bargain at \$1250 or best offer. Cecil Lemon, 161 4th St., Berrien Springs, Mich.

'37 PACKARD 8 120 conv. cpe. Rumble seat, immaculate, orig. black paint, runs fine. New top, r & h, 2 set tires & wheels, owner's manual. \$350. A. M. Musgrove, Qtr's 304, Mitchell AFB, N.Y.
Pioneer 1-4000, Ext. 4162.
McCULLOCH SUPERCHARGER, idler pulley, oil-bath air cleaner, pressure gauge, 4-venturi Holly adaptor. 2000 mi. since factory overhaul. \$130 f.o.b. Los Angeles. Terms: C.O.D. Roy Hanson, 1924 Compton Ave., Los Angeles 11.
'29 OLDSMOBILE 2-dr. sed. F-29 series, 30,000 mi. Complete in all respects, very good cond., runs well, easily restorable. Licensed, can be driven anywhere. \$250. Steve Hammond, 1913 Tecumseh River Rd., Lansing 6, Mich.
'13 T TOURING. Brass radiator, lights, carbide tank, aluminum hood, good tires, no rust or rot, running. Complete, easily restored. Photos if requested. \$600. D. R. Stewart, 3212 W. 4th, Amarillo, Tex.
'47 LINCOLN conv. cpe. Exc. cond. Completely rebuilt '51 Mercury engine. Brand-new brakes (includes emergency), wvs, tubes, top. Re-uph. &

painted gray. \$2150. Fred Stackable, 624 Isbell St., Lansing 10, Mich.

'33 BUICK cpe. with rumble seat. Good rubber all around, orig. uph. Outstanding cond., appearance & mechanically. 1 owner. \$250. J. B. Myers, Ancona, Ill.

'33 CADILLAC Fleetwood V-12 7-pass. limousine. Wire wheels, sidemounts, power brakes, adjustable shocks. Exc. orig. cond. Needs little restoring. Best offer over \$500. Harold Wanaselja, 826 Page Ave., Staten Island 9, N.Y.

'31 AUBURN 898-A conv. phaeton. Fine classic, rebuilt Lycoming engine; spare head, manifolds, carbs, radiator, transmission, headlights, etc. \$595 or best offer. Pix 25¢. W. L. Mraz, 17 Dogwood Rd., Morris Plains, N.J.

'50 WILLYS JEEPSTER with '52 Chrysler V8 engine, wvs, new top. Ford 3.51 to 1 rear axle. A-1 cond. Kenneth R. Bush, 1205 N. Lincoln, Robinson, Ill. Phone 740-W.

'40 LA SALLE conv. cpe. New top, good tires. Dark gray paint fair. \$395 or will trade for 4-w-d. Jeep. John Ostroski, 270 Chapman St., Greenfield, Mass.

'37 PACKARD 12 Model 1508 7-pass. sed.-limousine. 58,000 actual chauffeur-driven mi. 4 new tires, 2 good spares. Good paint & uph. \$950. Philip A. Davis, West Rockport, Me. Phone Camden 2897.

'39 LA SALLE 4-dr. sed. Very good cond., 48,000 mi. New valves & lifters, orig. paint, no rust, new tires, clean interior. \$250. Robert Suttner, 3145 S. Euclid Ave., Berwyn, Ill.

'50 KAISER conv. sed. Rare beauty, absolutely mint. Recent engine overhaul, new custom top, full leather interior, power windows, wvs, black. \$875 or offer. T. H. Menough, 337 E. 3rd St., Hinsdale, Ill.

'35 AUBURN phaeton. Lycoming straight 8. Restored, driven 800 mi. since rebore. New gears in dual-ratio rear axle; new top, uph., paint, & carpeting. \$975. Clarence O. Smith, 25063 N. Walnut, Newhall, Calif.

'40 PACKARD DARRIN conv. cpe. Mechanically perfect, no rust or dents. \$1200. Capt. Don Kenyon, 1740 ATS-PBAFB, West Palm Beach, Fla.

'36 JENSEN 4-place tourer. Orig. order for Clark Gable. Needs restoring; in daily use. \$750. Mervyn Greigor, 1215 Highland, Manhattan Beach, Calif.

K-2 CADILLAC-ALLARD rsdr. '53 190-hp Cadillac engine. Red, in exc. cond. 25,000 mi. \$2400 or best offer. Joann Hansen, 1547 Silver Lake Blvd., Los Angeles 26 NOrmandy 1-0839 weekends.

CORD 810 Sportsman conv. Clean, perfect converted gearshift, latest-type suspension & universal joints, r & h. Can be driven anywhere. Robert Cressman, 2780 Limekiln Pike, North Hills, Pa. Phone Turner 7-2047.

CITROEN 6 front-wheel-drive 2-seater sports conv. 1 of 3 special cars made for factory management. R & h. Robert Cressman, 2780 Limekiln Pike, North Hills, Pa. Turner 7-2047.

'51 RILEY 2½ liter. 31,000 mi., good mechanical cond. Black with red leather. \$1045. 1st Lt. Gilbert Henderson, 69 Spinning Rd., Dayton 3, Ohio.

'36 PACKARD Super 8 conv., 6 wire wheels, very good cond. thruout. Stored under chauffeur care 19-52. Yours to enjoy. \$775. W. J. Lennon Jr., Out of Bounds Farm, Rt. 41, Horsatonic, Mass.

'37 CHRYSLER Airflow 4-dr. sed. R & h, o.d., skirts, new head, new tires, recent valve job, radiator rodged, new brakes. Very good cond. W. L. Ebert, 2619 S. Jefferson, Mason City, Iowa.



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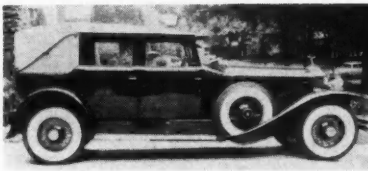
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'31 ROLLS-ROYCE Springfield Phantom I, Brewster sport sed. 11,000 mi., mint cond. New tires, beaut. inlaid mahog. interior, padded top. Best offer over \$1600. George H. Shufelt Jr., 5523 Corby St., Omaha 4, Neb.

'13 HUPMOBILE Model 32 6-pass. tour. Perf. body & engine. Needs top & some uph. Orig. manual. Best offer, cash or trade. John Harrison, R.R. 2, Box 124, Gillespie, Ill.

'20 WILLYS-KNIGHT touring. Hand-rubbed lacquer, orig. colors. Beautifully restored thruout. Rare literature & spec. antique tools. Only known 1920. Best offer over \$800. Albert Tucher, 2316 Terrace Ave. So. Plainfield, N.J.

'47 LINCOLN CONTINENTAL hardtop. R & h. o.d., ww's. Engine needs work. Beaut. 12-coat green metallic finish. Best offer. Joseph Clesceri, 1803 Lincoln Ave., Des Plaines, Ill. Phone V-Anderson 4-4823.

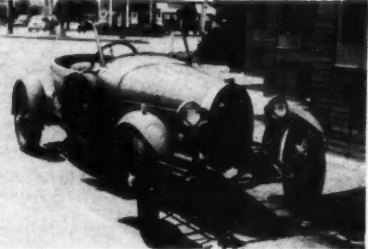
'47 LINCOLN CONTINENTAL hardtop. Blue. Rebuilt '51 Ford truck engine just installed. Good ww's, new brakes, pins, clutch. Clean. Best offer over \$1100. Martin Schwerthoffer, RD #1, Freehold, N.J. Phone FR 8-4484.

'41 LINCOLN CONTINENTAL hardtop, Merc. conversion; r & h, new paint (original Plympton gray). Body, chassis, brightwork, rubber, interior in exceptional cond. Driven every day. \$1600. C. L. Braegemann, Bridgeport, Mich. SAGINAW 4-8313.

PACKARD V-12 Dietrich conv. victoria. New \$100 paint job, new rings, side mounts, ww's. \$750. Will dicker & consider trade-in. R. E. Saunders, 71 South St., Rensselaer, N.Y.

DAVIS 3-wheeler. Absolute showpiece. Unblemished red morocco leather uph., matching carpets, white lacquer paint. Full instruments, inc. tachometer. Mechanically & bodily perfect. Genuine \$8000 mi. 35 mpg. \$1850. Dr. Milton R. Roth, 2240 Pacific Ave., Long Beach 6, Calif.

BUGATTI Type 38 2-liter straight 8, 4-pass. boat-tail tourer, cycle fenders. Recent o'houl (England).



New genuine pigskin uph., flawless blue lacquer paint, swirled dash. \$1500 firm. Dr. Milton R. Roth, 2240 Pacific Ave., Long Beach 6, Calif.

BUGATTI Type 57 conv. 3.3-liter, dual ohc. Bosch electric, Jaeger instruments, polished brakedrums, new Frendo lining, smart Gangloff body, plush interior, \$2200. Dr. Milton R. Roth, 2240 Pacific Ave., Long Beach 6, Calif.

BUGATTI Type 55 roadster. 115 mph. Dual ohc, supercharged, 2.3 liters. Conceded finest existing specimen. Numerous concours successes. 6 new racing Dunlops. Grand Prix motoring plus comfort. \$3500. Dr. Milton R. Roth, 2240 Pacific Ave., Long Beach 6, Calif.

'48 LINCOLN CONTINENTAL hardtop. Regal blue, ww's, r & h, o.d. 40,000 mi. Top cond. Best cash offer. J. P. Maloney, 210 N. Washington St., Alexandria, Va.

'23 FORD cpe. Exc. cond. thruout. Always garaged. No rust. Can be driven anywhere. Extra parts included. Walter P. Meyer, 176 Sturges Ave., Mansfield, Ohio.

'36 CORD Westchester. 43,000 orig. mi. Completely orig. & immaculate. New ww's, new silver gray lacquer finish. 2-owner car. \$2500 or best offer. Arden Hjelte, Sandy Beach, Rt. #4, Fond Du Lac, Wis.

'54 KAISER Darrin sports car, O.d., htr., ww's, low mileage, absolutely like new. Light green with silver green interior. \$2350. Lawrence L. McClure, 6401 Shannon Lane, Dallas, Tex.

'38 PACKARD Super 8 sed. O'hauled engine with new factory parts, new brake lining & battery. Good paint, 6-ply tires & uph. Pictures on request. \$495. L. W. Bohle, R-2 Box 147Y, Lebanon, Ore.

'29 FORD MODEL A touring. A-1 engine. New top, paint, leather uph. \$495. Photos on request.

25c. Franklin Gulf Service, Main & Montague, Franklin, Ky.

'35 CADILLAC V8 4-dr. sed. Wire wheels & discs. Exc. running cond., good tires. Back seat makes into bed. Paint, interior good. \$600 or reasonable cash offer. Joseph S. Marchisio, 826 E. Alosta Ave., Glendora, Calif. ED 5-9042.

'37 CORD sed., good cond. mechanically. Engine perfect. Needs uph. & paint. \$550. Also Auburn 653 & 8-100 parts. Clifford Moore Jr., Blackburn Rd., Rt. 3, Hammond, La.

'40 SS JAGUAR 2 1/2 liter. New 3-pos. top, good tires, new uph. Right-hand drive, fine running cond. \$1750 or best offer. Dick Free, 4910 Lower Valley Pk., Springfield, Ohio.

ANTIQUE AND CLASSIC automobile ads. Tremendous selection; all orig.; covers yrs. 1912-1934, many very rare. Complete lists 15¢ stamps or coins. Sheldon J. Lewis, 1373 E. 12th St., Brooklyn 30, N.Y.

'22 WILLYS-KNIGHT touring car. 4-cyl. sleeve valve engine. 42,000 mi. 33 x 4 tires. Genuine leather. Solid & runs good. \$2500. Robert D. Heitz, 135 N. Root St., Aurora, Ill.

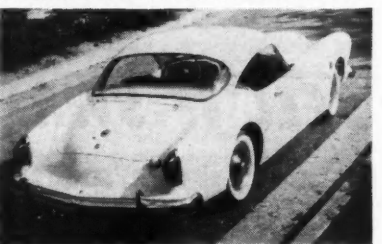
'37 BUICK Roadmaster. Model 80-C, custom built. Good running cond., needs some work. Best offer. H. Vent, 144-26 38th Ave., Flushing 54, L.I. Phone FL 9-4180.

'39 PACKARD 12 7-pass. limousine. Side mounts & luggage rack. New 6-ply tires. Engine fair, body good. \$300 or best offer. Robert Joseph Ritzer, 2245 Rowley Ave., Madison, Wis.

JAGUAR Mark IV drophead classic. 100% re-conditioned. New lacquer. 6 KO wire wheels, \$895 cash or might trade on TR-2, Austin-Healey or Porsche if realistically priced. H. D. Thompson, Box 1802, Jackson, Tenn.

'34 PACKARD classic Super 8 club sed. Gen. cond. good to exc.; 6 wire wheels, 4 new tires. Will consider delivery anywhere. \$750. G. E. Hoffman, 560 W. 78th St., Overland Park, Kan.

CADILLAC DARRIN prototype hardtop sports car. 500 mi. \$4100. Darrin Motors, 8006 Santa Monica



Bld., Hollywood, Calif. HOLLYWOOD 4-2668.

'30 PACKARD cpe. New paint, uph. Exc. running cond. Orig. owner. Must be seen to be appreciated. \$350. S. C. Radiator Works, 1321 S. Atlantic Blvd., Los Angeles 22. ANGELUS 9-0441 8 A.M. to 5 P.M., Mon. thru Fri.

STRIPPING '52 JAGUAR MARK VII for parts. Everything OK except Lr. quarter; low-mileage engine; also have 2 XK-120 engines for sale. Sell all or part. Nemith Auto Co., Traffic Circle, Rt. 9, Albany, N.Y.

'37 CORD supercharged cabriolet. 1 owner, orig. factory cond. Cream color, ww's. Best offer. Auto Boys, 39 W. Front St., Keyport, N.J.

'26 CHEVROLET Superior Model K 4-dr. sed. Rebuilt engine, new paint, good tires. \$300 or will trade for antique furniture. Philip M. Martin, 309 N. West St., Tipton, Ind.

'48 LINCOLN CONTINENTAL hardtop. 42,000 mi. 6800 mi. on 300-hp Cadillac V8 engine. New floor covering, leather & nylon uph., ww's, o.d. Exceptional car. \$2650 or make offer. William Collier, 412 1/2 N. Howard, Union City, Ind. Phone 391.

CLASSIC CAR Sales Catalogs: Packard, Chrysler, Lincoln, Cadillac, Pierce-Arrow, orphan and foreign cars; minimum \$5 each. Also MoToR (N.Y.). Annual numbers; details for large, stamped, addressed envelope. A. E. Twoby, 400 N. Kenmore, Los Angeles.

'49 MG-TC with Shorrock blower. Engine, trans., & blower o'hauled May '55. New interior, new leather uph. Clean, never raced. \$1150. C. H. Vernon, 701 Grove Ave., Corning, Iowa. Phone 462.

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'28 WHIPPET 6-cyl. cpe. Actual mileage 5700. Complete orig. cond. (engine, paint, spoke wheels, etc.). Runs perfectly. Instruction manual included. Mrs. Wilma Craig, Rt. 150, Chester, Ill.

PEPCO SUPERCHARGER for VW. Complete, easily installed, no modification nec. \$100. Earl M. Kenvin, 4237 Southern Blvd., Youngstown, Ohio.

'55 JAGUAR XK-140 conv. Black, white tires; wire wheels. 2300 mi., brand-new cond.; never raced or wrecked. \$3800 or best offer; will trade. J. C. Johnston, Box 42, Jackson, Miss. Phone 2-0387.

'42 LINCOLN CONTINENTAL cabriolet #134700. Lincoln ohv V8 engine, Bendix power brakes, new Goodyear ww's. Offer or trade. Modern Farm Equipment Co., Fulton, Mo.



'52 BENTLEY Park Ward Mark VI drophead, exc. thruout, power top, r & h. Cost \$14,447 new. Price \$5000. Consider trade for top condition Wraith. Alex Cameron, 8604 Humble Rd., Houston 16, Tex.

'38 ROLLS-ROYCE P-III limousine. Good cond. \$2750 for fast sale to close legal matter for client. Call, wire, or write Paul Berman, Attorney at Law, 1005 Grand Ave., Kansas City, Mo. Phone Victor 3911.

'37 CORD BEVERLY sed. Restored 2 yrs. ago. Driven 6000 mi. Motor, trans., front end rebuilt. Can be driven anywhere. \$900. F.o.b. Joplin. Bob Peters, 312 W 14th, Joplin, Mo.

'33 PACKARD Super 8 sed. Body, 6 tires exc. Dash mint. Top of engine good, bottom needs work. \$250 or best reasonable offer. G. Hutton, 634 E. Foothill, Azusa Calif.

'28 BUICK 4-door sed. Good uph., running cond. Orig. black & green paint. Must sell. Closest offer to \$150. J. H. Struble, 27 Foster St., Newton, N.J. CLASSIC CAR PARTS: Have miscellaneous supply of new & used parts for Packards & other cars. Richard Collins, 23-C Hare Ave., Auburn, Ala.

'35 AUBURN 851 conv. phaeton. Engine o'hauled. Beaut. beige paint job, new top. Professional mechanic's work. Orig. red leather uph. in fine cond. Best offer. John Pigott, 4906 Ravenna, Cincinnati, Ohio. BRamble 1-7923.

'37 CORD 810 4-dr. sed. Can easily be restored. Needs uph. Has professional paint job. Best offer. John Pigott, 4906 Ravenna, Cincinnati, Ohio. BRamble 1-7923.

'33 BUICK Series 60 sed. Side mount, orig. paint, new brakes. Good running cond. \$150. Pix 25c. G. H. Mast, R.D. #1, Kimbolton, Ohio.

'18 STUTZ BEARCAT. Authentic & beaut. \$4500. Pix 25c. F. Wade Edwards, 839 Marsh Rd., Menlo Park, Calif.

'22 PACKARD 6 custom club cpe. Perf. cond. 45,000 mi. Beaut. blue velvet uph., wooden wheels. Unusual vintage auto. Best offer. G. Eppley, 1227 10th Ave. W., Seattle, Wash.

'24 HUMPHREY 3-dr. sed. Orig. cond., shades on windows, leather trunk. Best offer. Herman Muscat, 639 S. 2nd St., Dundee, Ill. Phone HAZEL 6-4113.

'35 FORD 4-dr. phaeton sed. Exc. running cond. Hydraulic brakes, all new wiring. Needs uph. & top. Best offer. Herman Muscat, 639 S. 2nd St., Dundee, Ill. Phone HAZEL 6-4113.

'30 BUICK Model 40 sports rdstr., 6 wire wheels, fender wells, chrome radiator. Body & engine very good cond. Just o'hauled. \$400. George Arsenault, R.D. #1, Brooktondale, N.Y.

'01 INTERNATIONAL Pickup No. 511. Good cond. Hard-rubber-tired wooden wheels, chain drive, 2 cyl. Further info. on request. Frank M. Gallo, 900 Faxon Ave., San Francisco 12, Calif.

'36 FORD 3-window cpe., black. 1 suburban owner, orig., perf. showroom cond. inside & out. Kept garaged, Simonized. Best offer. Mrs. R. Kruger, 415 Provident, Winnetka, Ill.

SPORTS CAR SPECIAL. Italian-like styling, tubular chassis, speedster aluminum body, modified Crosley engine. Raced twice, 2 wins. Unique bargain. \$845 or trade. Paul Chiaraviglio, 9600 Winchester Ave., Chicago 43.

'40 LINCOLN CONTINENTAL conv. Full-race Cad 250-hp engine. Sharp cond. thruout. Will sell or swap for late-model car. A. G. Subt, 9747 E. Maplewood, Bellflower, Calif.

'48 TUCKER. Orig. Tucker engine, torsion bars, exc. Tropical rose & snowshoe white. \$2400 or trade. J. Beccue, 516 Bohland Ave., Bellwood, Ill.

'36 WANDERER German conv. sports car. 6 cyl., 85 hp, restored in '53. Engine o'hauled March '54.



Needs spot paint & rechroming. Best offer. For info. write J. L. Misretta, Rt. 3, Box 23, Killen, Tex. '50 FORD cpe. Full-race '55 Buick eng., custom paint. Immaculate. Optional McCulloch supercharger. Cost over \$3300. Best offer over \$2000. Maj. Margison, Box 141, Perrin AFB, Tex. '40 CADILLAC Model 72 touring sed. Exc. cond., 6 U.S. Royal ww's. 67,214 mi. 1 owner, 1 chauff.

feur. Make offer. S. D. Howarth, P.O. Box 89, Newark, N.J.

WANTED

'32 CHEVROLET rdstr. or touring. Any leads appreciated. Prefer Middle West location. Jim L. Marshall, Case Dorm, Box 219, Cleveland 6, Ohio. CHASSIS and body parts catalogs, owners' manuals, shop manuals, dealers' books on postwar Lincoln Continental. John J. Gubelman, 120 E. 87th St., New York.

'32-'36 PACKARD 12 conv. Restorable or partially restored. Within 500-mi. radius from Akron only. Custom body not required. J. W. Clinefelter, 1745 Front St., Cuyahoga Falls, Ohio.

'30 THRU '38 REO cpe. or conv. in decent cond., preferably in Eastern U.S. State full details, price. Larry Mariani, Box 308, Bridgeville, Penn. EDELBROCK dual intake manifold for Lincoln-Zephyr. Rod Quisenberry, 4725 E. 52nd Pl., Maywood, Calif. Phone LUdlow 5-4816.

TRUNK AND 2 REAR FENDERS for '31 Buick 4-dr. sed., Model 57. Must be authentic. Daniel W. Welsh, 2 Nile Dr., Rochester 9, N.Y.

'24-'30 PIERCE-ARROW suitable for junk or restoration. Need especially '26 steering wheel, in-

struments, front seat, windshield wiper. Edwin A. Goodman, 7212 Lynford St., Philadelphia 49. Phone PI 5-2042.

WILL PAY CASH for pre-war automobile adv. catalogs, auto show magazines, & radiator emblems, 1900-1942. Need also latest pre-war literature. Send list and prices. Lewis A. Mayer, Munith, Mich. THUNDERBIRD body parts only. Send price and cond. in 1st letter. J. Lanier, 504 Huntington Blvd., Arcadia, Calif.

SWAP

'46 LINCOLN CONTINENTAL hardtop, maroon lacquer, '54 Cad engine, for perfect '41 Cadillac Fleetwood conv., Austin-Healey, or what have you? In East. Jack Fiedler, R.D. #1, West Leesport, Pa. '37 CHRYSLER, '35 DE SOTO AIRFLOW sedans, orig. exc. cond. Swap both for nice '51 Ford or ? D. Miller, 13995 Davenport St., Pacoima, Calif. Empire 9-4706.

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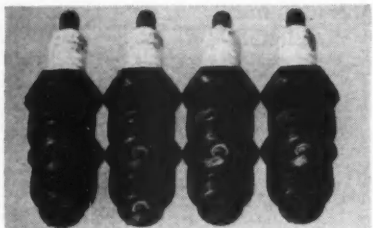
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Automotive engineer and S.A.E. member Winthrop Johns stands by his first test car, a 1940 Ford V8, used to show that corrosive acids are the major cause of power loss and engine wear.



A magnesium acid neutralizer destroys harmful catalysts which help form electrically conductive deposits on spark plugs; finally lead to internal shorting. Plugs shown above (just removed from engine) were used in a '54 Dodge V8 for 30,000 miles; still performing efficiently.



Filter and oil sample (left) from a car equipped with an acid neutralizer show less sludge, few contaminants—both are still clean. Cartridge and oil from unprotected engine (right) show normal heavy deposits after the same distance.



Heavy carbon deposits are actually "baked" on the piston crown (right) unless the formation of resins is inhibited (left). Carbon deposits cause less of power, increase oil consumption.

By WINTHROP A. JOHNS

Magna-Power—with a built-in magnet—is guaranteed to help any engine that uses less than a quart of oil each 500 miles OR YOUR MONEY BACK! This report is based on the only reliable testing method—hundreds of engines equipped with corrosion neutralizers compared with other hundreds without, all engines operated under otherwise identical conditions.

A white-and-black dairy truck, slightly in need of a paint job, drove into its garage in Morristown, N.J., on a warm day back in 1952, to bring to a close a road test that pointed out a major change in future automotive planning. The truck, a Studebaker Six, had just covered 125,000 miles of stop-and-start door-to-door deliveries without an overhaul or major engine repairs of any sort.

As drivers and mechanics gathered around they heard this startling information—with one exception, the wonder-engine had received the same servicing given 15 other trucks in the dairy fleet. The one difference was that a small magnesium alloy plug had been installed in the drain pan of the test vehicle. Purpose of the special magnesium alloy was to combat corrosive acids which are constantly forming in the engine during combustion!

But end results in this million-mile road test were not based on the performance of one truck. The small acid neutralizer had been installed in 15 trucks in the dairy fleet, while 15 others had been used as controls. It was felt that differences in driving habits, delivery routes and the engines themselves had been averaged out in this test covering a three-year period.

What were the actual results in this unusual road test? According to Mr. Edward L. Hark, garage superintendent of the Farmers and Consumers Dairy, engine wear was reduced by 82 per cent on the trucks equipped with the magnesium plug. Mr. Hark also stated that although all trucks were given the same

servicing, oil consumption in the protected engines was noticeably reduced and the oil was much cleaner at the time of change.

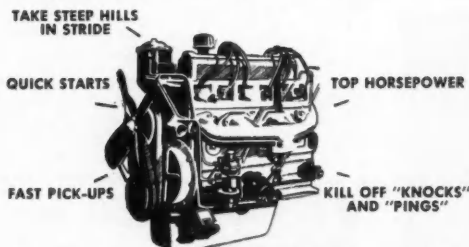
ENGINES WITHOUT MAGNA-POWER		
Total Mileage	Wear (inches)	Wear-Rate (micro-inches per 10,000 miles)
*45,052	.01492	3310
45,700	.01114	2440
30,886	.01192	3860
45,918	.01344	2830
ENGINES WITH MAGNA-POWER		
*125,482	.00606	485
65,321	.00284	437
25,712	.00218	848
45,117	.00333	740

(*These engines were taken from the same truck used by the same driver on the same run.)

MAJOR CAUSE OF WEAR FOUND

Laboratory and road tests had finally proven that the major cause of wear in today's powerful engines is corrosive acids formed during combustion. Yes, the regular or high test gasolines you are using in your car contain sulfur. This sulfur, along with other impurities, is burning away your muffler and tailpipe, eating away the chrome on your rear bumper and, **EVEN MORE IMPORTANT**, wearing away at pistons, cylinders, rings and other expensive parts of your engine.

How do these impurities—they're actually acids—do their damage? Every 20 gallons of gasoline contain almost half a cup of destructive sulfur. During the combustion process this sulfur joins with water in the oil system to form metal-eating sulfuric acid. In the same manner, harmful carbonic acid, hydrogen bromide and chloride are formed in your engine. These acids get to work on metallic parts and

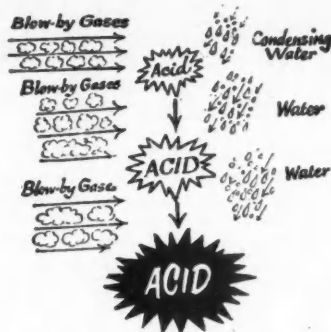


By destroying corrosive compounds such as sulphuric and carbonic acid and peroxide catalysts, Magna-Power stops chain reaction which leads to the formation of sludges and a serious loss of engine power. Cars produce "full engine power" when the magnetic acid neutralizer combats metal-eating compounds. For your Magna-Power magnetic neutralizer send \$2.95 to Johns Mfg. Co., Dept. MT-115, Middlesex, N.J.



The new Magna-Power acid neutralizer uses a powerful Alnico magnet to "pull" iron and steel particles out of the oil. Simply place the unit near some iron filings and watch how they adhere to the magnet.

(ADVERTISEMENT)



Blow-by gases—an inevitable part of combustion—combine with small quantities of water to form metal-eating acids. Corrosives such as sulphuric, hydrobromic and carbonic acid tend to draw more water which attracts more acid in an avalanching process. The new Magna-Power magnetic neutralizer destroys corrosive acids, attracts iron and steel filings and prevents serious loss of engine power.

actually cause most of the wear formerly blamed on friction. The damage is extended as accompanying sludge and carbon deposits result in a wasteful loss of power.

With test results to show that a powerful permanent alkaline agent would neutralize the acids and inhibit sludge and carbon formation, the Johns Manufacturing Company has prepared a special magnesium-aluminum alloy neutralizer called Magna-Power. Tests conducted by the Canadian National Research Council (Canada's Bureau of Standards) and our own Southern Analytical Laboratory in Jacksonville, Fla., have found that this special magnesium alloy (1) effectively neutralizes corrosive engine acids, (2) greatly inhibits the formation of sludges, gums and resins and (3) destroys catalysts that cause oil break-down products which foul spark plugs and cause pre-ignition and internal shorting. With a powerful Alnico magnet attached to the plug, it was found that many metallic chips and filings in the drain pan could be removed.

What kind of tests were these? Two and a half years after Magna-Power was introduced to the automotive market, the Canadian research group announced, independently, the results of its tests on engine acids. In September, 1953, the SCIENCE NEWS LETTER said: "Scientists

at the Canadian National Research Council in Ottawa have found that adding certain chemicals and metals to automobile oil will greatly extend its life. To the motorist this means he may not have to change oil every 1,000 miles, but may be able to use the same oil for nearly 7,000 miles."

All tests also indicated that the new alkaline and detergent oils were of benefit to the engine. These alkaline additives did offer protection against engine acids, BUT ONLY WHILE THE OIL WAS NEW. These agents tended to "wear out" and offered little protection after 800 miles or so.

Another independent test showed how Magna-Power slowed the formation of engine-clogging sludge, resins and gums.

Last year J. A. Milteer, of Quitman, Georgia, covered 2,700 miles in his '53 Ford without the Magna-Power. He then drove the same distance with a Magna-Power. Both runs were made with Shell X-100, SAE 5-20 oil—a high detergent alkaline oil. Drain samples were then sent to an independent laboratory for analysis. The report by the Southern Analytical Laboratory, Jacksonville, Fla., showed approximately 1700% more sludge in the oil without Magna-Power protection, and almost complete elimination of resins and gums. Here are the actual figures:

	With Magna-Power	Without Magna-Power
Sludge:	0.3	5.0%
Resins and Gum:	None	0.5%
Sugars (reducing substances):	Trace	Present
(Reports #36,280 and #36,333)		

WHAT ARE THE BENEFITS?

Now the question arises, what happens (or does NOT happen) in the engine system when harmful corrosives such as sulphuric and carbonic acid are destroyed along with harmful catalysts? Of top importance is the increase in power, pickup and speed brought about by the elimination of the harmful spark plug deposits and catalytic agents carried into the combustion chamber by the oil. These are thought to rob power by causing "cold flame" and pre-ignition or actual spark plug shorting at higher compression pressures.

Next the formation of clogging sludge, varnish and gums is greatly inhibited. With fewer harmful deposits being formed in the engine, you can drive further between oil and filter changes. Filter life can often be doubled (as proven by road tests) and when the car is used for long distance runs the same cartridge may be used for 14,000 miles or more.

Then, there is the matter of wear on pistons, rings, valves and other parts such as wrist pins and bearings. Laboratory and road tests alike show that wear on these parts is reduced by as much as 80%. This means a car may be driven well over 100,000 miles (10 years driving for the average motorist) without an overhaul.

Finally, iron and steel filings that can rip and tear at your engine are collected on the powerful Alnico magnet and can

be removed at your next oil change. This gives your engine double protection—Magna-Power neutralizes metal-eating corrosive acids while picking up free magnetic abrasives in the oil system.

WE HAVE THE ANSWERS!

Will the Magna-Power magnetic neutralizer work effectively in both old and new cars?

Magna-Power is of benefit to any car—old or new—that uses less than a quart of oil per 500 miles. Beyond that it may help, but road tests have not yet been conducted to give conclusive proof.

How soon can I notice a difference in my engine after I install Magna-Power?

The oil shows cleaner even after the first 1,000 miles and by the time you reach 5,000 miles there will be a noticeable increase in power. The best way to measure that is to time the acceleration from 10 to 50 mph over the same road in the same direction and under the same weather conditions. Do this now—then see how Magna-Power gives you "full engine power"!

How does Magna-Power work with the new type alkaline and multi-grade oils?

Magna-Power inhibits the formation of many of the deposits which tend to "overload" the oil. With fewer break-down products being formed, the multi-grade oils (such as 5-10 and 10-30) stay clearer and cleaner longer and do not deteriorate as readily. Magna-Power has a similar beneficial effect on the new detergent (alkaline) oil as the magnesium alloy combats the acids and other formations which wear down additives.

PRIVATE TESTS GIVE PROOF!

AUTO MECHANIC SAYS "YES"

I recently purchased a Magna-Power acid neutralizer for my (six-year-old) '48 Olds 88. In a little over 500 miles the results are amazing, faster pick-up, cleaner oil, quieter engine. The engine has taken on a new life. In fact, I am an auto mechanic for over 20 years and have been turning thumbs down on most gadgets until I read about Magna-Power. L.L.M., PHILADELPHIA, PA.

IMPROVED ENGINE PERFORMANCE

After using your product, the Magna-Power acid neutralizer, for not less than 1,200 miles, I find that it has improved the performance of the car to the point where the performance is comparable to that when the car was first purchased three years ago.

D.T.B., SAN FRANCISCO, CALIF.

OUR WAY OF DOING BUSINESS

Fill out the coupon at the bottom of this page and mail it to us today. Your Magna-Power is shipped to you as soon as your order is received. Have the Magna-Power magnetic neutralizer installed in your oil drain pan at your next oil change, then see the difference in your automobile.

EXPERIMENT WITH THE MAGNA-POWER NEUTRALIZER AT OUR RISK

If you are not satisfied with the way it works, send it back, at any time (years from now, if you choose), for an immediate refund.

Canadian orders filled from Toronto stock . . . 2.95 each, tax incl. Canadian checks, money orders or cash accepted.—Available for foreign and U.S. passenger cars, trucks, buses, tractors and many other engines. Indicate year and make of vehicle with all orders.

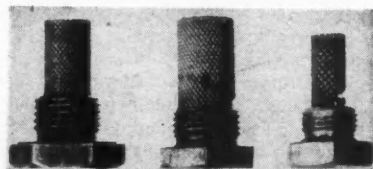
JOHNS MFG. CO., Dept. MT-115, Middlesex, N.J.

My car is a . . . (make) . . . (year). Please send me postpaid, a MAGNA-POWER MAGNETIC NEUTRALIZER. I enclose \$2.95. I understand that it is sold with an unconditional guarantee of satisfaction or my money back.

Name

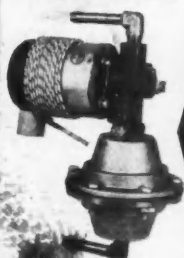
Street

City State



Here's proof that Magna-Power's magnesium alloy serves as a "sacrifice" to protect other parts of the engine. Acid action on Magna-Powers that have been in use for 3,000 to 10,000 miles is evident in this photo. Magna-Power at left shows normal discoloration caused by formation of salts during acid neutralizing process. Although discoloration is usual sign of Magna-Power's effectiveness, pitted units (center and right) show how acids can destroy engine metals.

HERE IS THE SECRET OF



**REAL
Power**

FOR YOUR ENGINE

Do you want a real surge of power from your engine when you tickle the accelerator? Want quick getaway and speed? Then you need a Power-Jector!

The Power-Jector is a new, amazingly effective water-alcohol injection system that actually increases and retains the operating efficiency originally designed into today's high compression engines.

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continued from page 34

Is Horsepower Dangerous?

to bring into focus an engineering term that has been sadly neglected by ad writers when referring to horsepower. That term is "torque." You cannot have horsepower without torque, and torque determines to what extent the horsepower has been put to use.

One horsepower is defined as being capable of producing 33,000 foot-pounds of work per minute, while torque is defined as a twisting action, or a force that causes the rotation of an object around its own axis. Horsepower, then, can do a certain amount of work in a given time, and torque is the result of that work.

Maximum torque and maximum horsepower are developed at widely different engine speeds, torque being dependent upon volumetric efficiency, horsepower being dependent upon volumetric efficiency *plus* engine revolutions. In other words, maximum torque occurs when volumetric efficiency is maximum, while peak horsepower occurs when the torque value, multiplied by the rpm, or crankshaft speed, reaches maximum.

Even tho an engine will indicate 250 horsepower on a dynamometer at 4000 rpm, torque value will be considerably below maximum at that speed. Conversely, with torque at its maximum at 2000 rpm, horsepower output will be considerably below maximum at peak rpm. (1, page 34). It is this spread that makes it impractical, in most cases, to use the full horsepower potential of an engine.

Question: How can automotive engineers utilize the tremendous torque produced by high horsepower potential to create brilliant performance in acceleration and normal driving range where it is wanted? One way is to gear transmissions and differentials to take full advantage of the operating characteristics of any given engine to produce flashing mid-speed-range performance. Engineers are doing this to a large extent now (as evidenced by the huge increase in horsepower as compared to the modest increase in top speed in the last few years; see graph 2, on page 34).

Recent passing tests conducted at 20 and 60 mph produced an interesting example of how increased performance thru engine design and gearing can reduce the head-on collisions so prevalent on today's highways. The test cars, all Chevrolets, were of '51, '54 and '55 vintage, equipped with automatic transmissions. In these tests, the pace car maintained a constant speed, and, in accordance with established safety standards, a distance of one car length for each 10 mph was observed before beginning to pass and before cutting back into line after passing. A glance at 3 (page 34) will show the marked reduction in passing time with each increase in horsepower. This alone is a very worth-

while contribution to safety when you begin to count up the number of cars you pass every time you take a trip. This doesn't mean it is necessary to exceed the speed limit, either; rather, it reduces the time you have to spend on the other fellow's side of the road.

Horsepower, then, is not in itself dangerous. There are too many variables that must of necessity be associated with it to judge its good or bad qualities. That it has become a universal yardstick for overall performance is just as unfortunate as it is inaccurate.

Detroit needs a good performance yardstick, not only for the industry's own use but for you, the consumer, as well. A universal method of easily arriving at a performance index regardless of the make of car would eliminate false conceptions and erroneous conclusions once and for all. Thus, each car manufactured would immediately have to stand on its own real merits.

If they would, manufacturers could get together on a workable formula that could be reduced to graphic presentation and applicable to all make and model cars. If really workable, it would undoubtedly be adopted as a standard of automotive performance indexing by the Society of Automotive Engineers, as horsepower rating methods have been for engines.

This formula should *not* be based on power output, but upon all-around performance. Equal consideration should be given all factors that make up this performance, such as acceleration, braking, fuel consumption and gross weight. It should make obsolete any reference to horsepower, or any other inaccurate gimmicks presently utilized in attempting to evaluate automotive performance. Reduced to graphic form, the acceleration curve would be plotted from 0 to top speed in increments of 10 mph, beginning at the gross weight mark for acceleration corresponding to the weight of the car being evaluated. The curve would be determined by the time required thru each 10 mph point. Fuel consumption could be plotted on a miles-per-ton basis as is the case with the Mobilgas Economy Run, again with the plotted line beginning on the gross weight mark for fuel consumption. Braking could be plotted from the deceleration gross weight point, and its curve would be dependent upon distance vs. time. The graph, properly set up, would allow the plotted curves to cross somewhere within the rectangle. This point of crossing would be the performance index. (It seems reasonable to use gross weight as a starting point, because each component of performance would be dependent upon compensation of the load in tons.)

If no solution is forthcoming and the continued use of the phrase "horsepower" shakes you up, then check your habits and go on the defensive, because the mill under the hood just won't get less potent for some time to come. —John Booth

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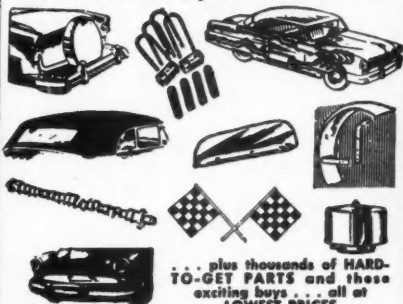
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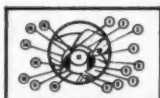
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50,000 CAR MILES! Before LIFE-TIME development, the spark plug was the most often replaced part of your car. Engineers agreed that "creeping paralysis," gradual electrode disintegration, carbon buildup, widening gap, burning, blistering, insulator failure could waste one gallon in ten. The LIFE-TIME plug goes far beyond the life of the average set of tires, the average battery, firing clean, hot and steady at 50,000 car miles! Most spectacular spark plug research breakthrough in 50 years allows unprecedented warranty. We GUARANTEE GREATER GAS MILEAGE—GREATER ACCELERATION—A MAJOR POWER INCREASE—OR YOUR MONEY BACK.

HOW 17 PT. FIRING WORKS

Note electrodes closely. A circular arcing area (four concave segments). Gap being the same from all points. Electricity has property of arcing from coldest point. Current also arcs more readily from apex of two planes than from face of a flat, metallic surface. Note that there are 16 apexes (where two planes meet) — all the same distance from the center electrode.



SPARK ROTATES AROUND CIRCLE. Normal heat and spark erosion are spread around the entire 360 degrees and around the whole circumference of the center electrode.

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NOW ORDER REGISTERED SET FOR YOUR CAR AT POPULAR PRICE!

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Gear _____
Driver _____

Power Test
at 1000 RPM 1000 RPM 1000 RPM 1000 RPM 1000 RPM

Test	1000 RPM	1500 RPM	2000 RPM	2500 RPM	3000 RPM
HP	12.2	15.0	17.5	19.5	21.0
MPH	45	55	65	75	85
MPG	25.0	28.0	30.0	32.0	34.0

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SPECIAL SINTERED CORUNDUM INSULATOR— Made of gem-like mineral which conducts heat 20 times better than ordinary porcelain. Special shape (seen beneath electrodes) is designed to vaporize and exhaust wet carbon and oil.

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"THANKS FOR YOUR WONDERFUL LETTERS"

The real test of a spark plug is "What will it do in my own car?" Take the above dynamometer test on a 1951 Buick Super. It shows an 8 horsepower gain with Life-Time 17-point plugs. That was a 12½ hp gain at 2000 RPM. You don't need a dynamometer with Life-Time Plugs. You can feel the difference both in your ride and your pocketbook. Try a set and let me hear from you about them. Many Thanks.



Frank Chittams
Inventor of the LIFE-TIME Spark Plug

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- CONTINENTAL MANUFACTURING CORP.
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- Make of my car is _____ year _____
- Model _____ No. cyl. _____
- I enclose \$ _____ (check, cash or money order)
- Name _____
- Address _____
- City _____ Zone _____ State _____

